THE CARABIDAE OF TASMANIA.

By Thomas G. Sloane.

(With four text-figures.)

This paper is founded on the Carabidae from the collection of the late Mr. Augustus Simson, of Launceston, which has recently been acquired by the Trustees of the South Australian Museum. In addition, I have been able to examine the large collection of Carabidae made by Messrs. H. J. Carter and A. M. Lea in northern and western Tasmania during the month of January, 1918, which consisted of 51 species; 14 of these were new species, of which 11 were not represented in the Simson collection. The Tasmanian species in my own collection, some belonging to Mr. Lea, and some sent by Mr. F. M. Littler from Launceston have also been seen.

The type specimens of the new species described in this paper have been sent to the South Australian Museum.

Synopsis of Paper.

Introduction.

Scutellar striole. In the Carabidae the elytra have usually nine striae and a short striole at the base of the first or second stria known as the scutellar striole.* There are many variations from this normal pattern; sometimes the elytra are without any striae, while in *Planetes australis* Macl., there are twenty-five striae; probably every number from one to twenty-five occurs, but I only know of more than seventeen as occurring in some species of *Planetes* and in the genus *Polystichus*. Only the scutellar striole will be considered, in order to obtain an idea of its taxonomic value; for, though it has been used as a classificatory character, its morphology and origin do not seem to have been given attention. The Carabidae must originally have had the elytra 10-striate, the scutellar striole

* Sometimes in the tribe Pterostichini a well developed tenth stria occurs, but in such cases the series of umbilicate punctures is found in the usual position on the ninth interstice, so that in these cases it seems evident that the extra stria has been developed on the ninth interstice.

being the rudiment of a stria now more or less lost. The clue to the original striation of the elytra may be found in the tribe Migadopini of the Southern Hemisphere, and in the Holarctic genus *Pelophila,* where an extra second stria is found basad from the apical declivity. The text figures given below show the four distinctive forms of the normal Carab striation with regard to the scutellar striole.

Fig. 1 is the pattern of the striation in *Calyptogonia ater* Sl., a Migadopid from Tasmania, viz., ten striae on the basal two thirds, and nine towards the apex as a result of the abbreviation of the second stria.

Fig. 2 shows the junction of the first stria with the remnant of the second stria as exemplified by *Dicrochile ventralis* Blackb.

Fig. 3 gives the second stria reduced to a striole at the base of the second interstice as occurring in *Gnathaphanus herbaceus* Sl.

Fig. 4 is drawn from the elytra of *Cataclromus elseyi* to show the commonest form of striation in the Carabidae; here the base of the first stria has become the scutellar striole owing to the capture of the first stria by the second.

It may be assumed that a strong tendency towards the reduction of the original second stria by shrinking away from the apex must have developed very early in the history of the Carabidae, and that in many cases the reduced second stria became united with the first; this union of the first and second striae has then been the means of the tendency for the elimination of one stria having been transferred to the basal part of the first stria. Often the second stria has been completely lost where the reduction has continued on the second interstice, but it is very rarely that when the base of the first stria has become the striole, it has been altogether atrophied.

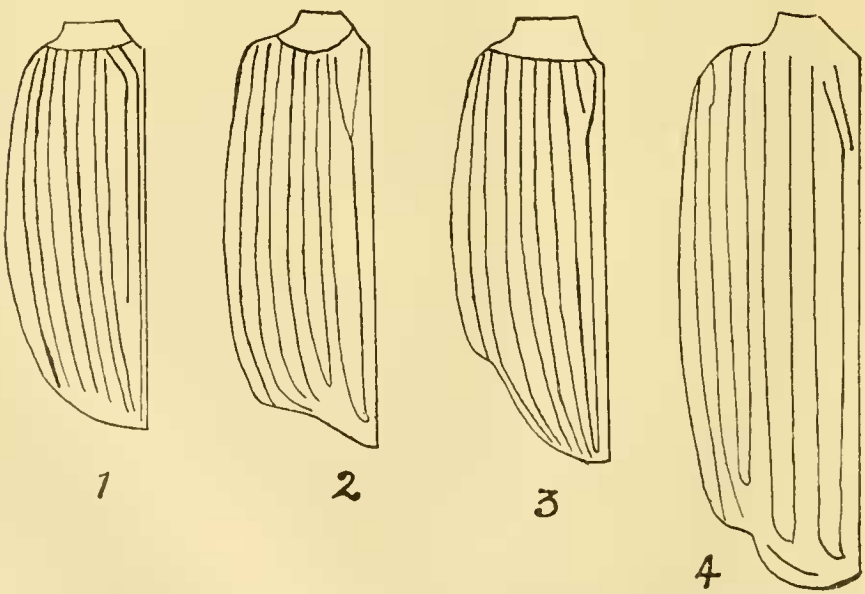

Fig. 1. *Calyptogonia ater* Sloane.
Fig. 2. *Dicrochile ventralis* Blackburn.
Fig. 3. *Gnathaphanus herbaceus* Sloane.
Fig. 4. *Cataclromus elseyi* White.

Vesture beneath joints of anterior tarsi in ♂. The vesture of the under-surface of some of the joints of the anterior tarsi (also of the middle tarsi in some cases where the anterior tarsi are clothed beneath) has long been recognised as an important character for the classification of the Carabidae, but I have seen no notice of its probable course of development. To have the underside of some joints of the tarsi clothed beneath is essentially a character of the male; very rarely the basal joint of the female is dilatate and clothed beneath, *e.g.*, in the American genus *Stenomorphus*, and in the Australian species *Notonomus æques* Cast., and *N. parallelomorphus* Chaud. The vesture assumes two main forms, viz., the spongiose and the biseriate forms. The spongiose vesture is older than the biseriate vesture, and is that from which the latter is derived; it alone is found in the Carabidae-disjunctae; the tribes Migadopini and Hiletini of this division have four anterior tarsi dilatate and clothed beneath. Most of the tribes of the Carabidae-conjunctae have the biserate form of the tarsal vesture, but spongiose vesture occurs in the Broscini and Pelecini of the Carabidae-uniperforatae, and in the Chlaeniini, Oodini, Licinini, Agriini, Dryptini, and Brachynini of the Carabidae-biperforatae. The Harpalini are the only tribe known to me in which both the spongiose and biseriate types of tarsal vesture occur, and here is found the clue to the derivation of the biseriate from the spongiose vesture. In the genus *Amblystomus* the brushes of squamae beneath the joints of the four anterior tarsi are dense with a longitudinal line dividing them in the middle, so that actually the squamae are arranged bilaterally. Any bilateral form would have an equal number of rows of squamae on each side of the joints; this can be seen in the American genus *Anisotarsus*, and in some species of *Diaphoromerus*. At any decrease in the number of rows of squamae which occurred, one row would go off on each side, and so the biseriate type of vesture would develop. That this might be the case may be seen by examining *Anisodactylus discoideus* Dej., a North American species, which has eight rows of squamae on the second joint of the anterior tarsi, but only four on the second joint of the middle tarsi. If this view of the origin of the biseriate type of tarsal vesture be accepted, the fact that this form occurs in one division of the tribe Harpalini and in the tribe Pterostichini, is to be considered a case of analogous variation, and not as any evidence of affinity; the occurrence of spongiose tarsal vesture in the Harpalini suggests that this tribe is more ancient than the Pterostichini, a tribe with only the biseriate form. Seeing that the tendency to reduction has only to be carried one step beyond the biseriate form of vesture to result in the tarsi becoming naked beneath, it is not astonishing that naked tarsi in the male appear in all directions throughout the Carabidae; genera have been proposed only on the character of unclothed tarsal joints, but it may be confidently asserted that this negative character is not of generic value.

Umbilicate punctures of elytra. It seems evident that the interstices of the elytra represent the longitudinal veins, and the striae the interspaces of the upper wings of the insect-group from which the Coleoptera are derived. In the Carabidae, on one or more of the odd interstices of the ordinary 9-striate elytron, may be found sensitive setae rising from umbilicate punctures. Dr. G. H. Horn has used the terms "ocellate" or "dorsal punctures" for these setigerous punctures; but, seeing that they have often considerable taxonomic value in the family Carabidae, it seems necessary to have one definite and unvarying term for them: the name *umbilicate punctures*, which has been applied to them already, might

with advantage be restricted to them when describing Carabidae. Umbilicate punctures are often wanting from all the odd interstices except the ninth. Dr. G. H. Horn has said that they are wanting from the ninth interstice in the genera *Panageus, Micrixys,* and *Apotomus,* but I am not sure that such is the case; in *Panageus* and *Micrixys* they seem to be hidden by the setosity of the interstice, but I considered I detected umbilicate punctures in *Panageus; Apotomus* shows, in fresh specimens, at least one long sensitive seta near the base and another near the apex of the ninth stria; if these setae are not rubbed off, the punctures from which they rise may be discerned. I regard these sensitive setae of the odd interstices of the elytra as homologous with the "macrotrichia" found by Dr. Tillyard on the wings of the Mecoptera; and this gives a reason for their position and taxonomic value.

Anterior cotyloid cavities. In the first division of the Carabidae, or subfamily Carabinae (here called Carabidae disjunctae) the anterior coxal cavities have one opening inwards; in the second division, or subfamily Harpalinae (here called Carabidae conjunctae) there may be either one or two openings inwards; therefore I have further divided the Carabidae conjunctae by this character into Carabidae uniperforatae and Carabidae biperforatae. The division of the inward opening of the anterior cotyloid cavities into two foramina is caused by a chitinous crosspiece which extends at right angles from each side of the antefurca.

Attention may be drawn to an aberrant modification of the biperforate form of the cavities found in the genus *Silphomorpha,* where the point of each epimerum has moved forward and become attached on each side to the chitinous crossbar of the cavity; this results in *Silphomorpha* showing but one opening inwards, which is not homologous with the single opening of the uniperforate cavity, but with the anterior foramen of the biperforate cavity. *Silphomorpha* has the antefurca very short, the posterior part of the anterior coxae more exposed than usual, and the posterior opening of the ordinary biperforate cavity completely lost owing to the shifting forward of the epimera. Our other Pseudomorphid genus *Adelotopus* has the ordinary biperforate form of the cotyloid cavities, and the antefurca of usual length. It may be noted, as a case of analogous variation, that the anterior coxal cavities in the family *Hydrophilidae* resemble those of *Silphomorpha.*

The results obtained by the use of the different forms of the anterior cotyloid cavities in the classification of the Carabidae are satisfactory, and a great help in determining the position and affinities of many genera in the family; but their use causes the arrangement of the tribes to differ greatly from the system now generally recognised. Taking the "Catalogus Coleopterorum Europae "(1906) as a standard of the present arrangement of the tribes the plan here adopted brings about the following changes of position. The Scaritinae, Elaphrinae and Lorocerinae would come first, followed by the Omophroninae and the Carabinae; the position of the tribes from Morioninae to Perigoninae would remain the same; Granigerinae, Harpalinae, Zabrinae, Amarinae, Pterostichinae, Masoreinae, and Odacanthinae would follow as members of the Carabidae uniperforatae (but my arrangement of the tribes of this division would not be the same as in the Catalogus). Apotominae, Panageinae, Chlaeniinae, Oodinae, Licininae, Lebiinae, Dryptinae, and Brachyninae would be placed in the Carabidae biperforatae. The position of the following tribes in my system may be indicated:—Anchonderini and Egini to be included in the Odacan-

thini as suggested by Schaum; Cratocerini (as typified by the genus *Basolia*) comes into the Carabidae uniperforate; Mormolyceini, Agriini, Anthiini, Graphipterini, and Orthogonini, all of which I have examined, belong to the Carabidae biperforatae.

With regard to the plan of having names for the six great sections into which the system here advocated divides the Carabidae, it has seemed to me that an undoubted benefit of definiteness results from its use, therefore I hope it will prove acceptable to Carabophites.

Middle coxal cavities. As a matter of some interest it may be placed on record that in the Carabidae generally (including *Metrius*) the middle coxal cavities are confluent, the mesosternum being arched to cover the opening between the cavities by its meeting with the metasternum between the coxae; but, in the tribe Ozaenini, as far as I have observed, each coxal cavity is completely defined, and separated from the other by a chitinous partition, as a result of the close and continuous attachment of the mesosternum and metasternum. Further investigation on this subject is required, both in the Carabidae generally, and in the Ozaenini, where my observations have been confined to two species, viz., *Pseudozaena orientalis* Klug., and *Mystropomus subcostatus* Chaud.

Anterior tibiae.—The spurs and their position. Hitherto authors seem to have recognised practically only two plans, as far as the position of the two spurs of the anterior tibiae are concerned, viz. (1) both terminal (as in *Carabus*), (2) one above the other (as in the Scaritini); but there is a want of exactness about this statement of the case, as may be readily seen by anyone who will examine the position of the spurs in the tribes Ozaenini, Carabini, and Scaritini, not to mention others. One of the spurs never varies in its position throughout the Carabidae, it is always at the inner side of the apex of the tibia; in the tribes Metriini and Ozaenini, the other spur is opposite the inner one at the outer side of the apex; here there can be no question as to both spurs being terminal, nor as to which is the inner, and which the outer. An examination of any member of the tribe Carabini will show that it is the spur corresponding to the outer one in the Ozaenini that is the one which, by a change in position, becomes placed on the lower side of the tibia, a little obliquely above the inner spur; it is far more distant from the apex in the Scaritini and other tribes. Dr. G. H. Horn habitually used the term "inner" for the spur which varies in position; this is evidently an erroneous term, and seeing that in every case, where it is not opposite the inner spur at the outer side of the apex, it is more or less above the apex, the term upper would seem more suitable for it; also I think the words "both spurs terminal" can only accurately be applied to the tibiae in the tribes Metriini and Ozaenini. Whether the position of the spurs in Metriini and Ozaenini implies any relationship between these tribes I am not prepared to say, but I believe the form of the anterior tibiae found in these two tribes is the most archaic now existing, and I attach a high value to it.

Components of the Tasmanian Carab-fauna.

The Carab-fauna of Tasmania includes 18 tribes, 60 genera, and 183 species [and there are, besides, 1 tribe (Chlaeniini), 1 genus (*Chlaenius*) and 9 species reported from the islands of Bass Strait; also, the introduced *Laemostenus complanatus* Dej.] Two tribes, 8 genera, and 59 species have not yet been found on the mainland of Australia; this endemic part of the fauna is essentially

Antarctic. On the whole the Carab-fauna of Tasmania is an Australian one modified by the presence of a greater proportion of Antarctic forms than occur in the fauna of the continent, and by the absence of the numerous oriental tribes, genera and species that are such a conspicuous character of the Carabidae of Australia.

Keeping in view accepted geological opinions, it is evident there may well be three component parts in the insect fauna of Tasmania, viz., (1) an original Mesozoic fauna similar to that of Australia in the Mesozoic era; (2) an Antarctic element introduced along with the Marsupials not later than the Miocene; (3) an inflow of immigrants from Australia in late Pliocene and Pleistocene times. Of these, the Antarctic will be the most easily discernible, for the other two components are parts of one fauna, as it appeared before and after the long Eocene-Miocene separation between Australia and Tasmania. It is obvious that the glaciation of Tasmania during the Kosciusko epoch (Pleistocene) must have profoundly affected both the original (Pre-Tertiary) and Antarctic (Eocene-Miocene) faunas, for only on the low lands could any insects have survived. This glacial period must also have prevented the access to Tasmania of many warmth-loving Australian groups during the last union of Tasmania with Australia, and it will have helped the spread of Antarctic species along the cordillera of Eastern Australia.

I take the present opportunity to draw attention to a striking fact which is disclosed by studying the present distribution of dragonflies. In the list of genera of dragonflies given by Dr. R. J. Tillyard in his book, "The Biology of Dragonflies," p. 300, he enumerates for the order Odonata, 362 genera belonging to the different zoogeographical regions of the world. These are distributed between the different regions in the following numbers:—Neotropical region, 111 genera; Nearctic, 24; Palaearctic, 14; Ethiopian, 70; Oriental, 82; Australian, 1. These figures show 242 genera in the three southern land masses of the globe, as against 120 genera in the three northern land masses. In 1896 I obtained a similar result for the tiger beetles, my figures showing 30 genera found in the three southern land areas, as against 8 in the three northern areas. This question requires to be treated in a similar way for other orders and families of insects before any inferences of value can be drawn from it, but the results obtained from these two widely-separated groups of insects have led me to suppose (1) that the present distribution of insects may have been mainly from the south, and (2) that the present distribution of animals may be, even in such an ancient class as the Insecta, largely a matter of the Tertiary period; this latter inference would mean that the northern lands had undergone more vicissitudes in the destruction of their animal life during the Tertiary period than southern lands, and had been since the beginning of Tertiary times largely stocked from the south.

Family CARABIDAE.

Table of Tribes found in Australia and Tasmania.

1. (10) Middle coxal cavities not entirely enclosed by the sterna, epimera of the mesosternum attaining the coxae. CARABIDAE DISJUNCTAE.
2. (7) Anterior coxal cavities closed behind. .. .. .. CARABIDAE CLAUSAE.
3. (4) Anterior tibiae emarginate on inner side, both spurs terminal. OZAENINI.
4. (3) Anterior tibiae emarginate on inner side, one spur above apex

5. (6) Body not pedunculate, bases of prothorax and elytra in contact with one another. (Elytra 10-striate basad from apical declivity.) MIGADOPINI.
6. (5) Body pedunculate, bases of prothorax and elytra remote from one another .. .. SCARITINI.
7. (2) Anterior coxal cavities open behind .. .. CARABIDAE APERTAE.
8. (9) Mandibles strongly dentate on inner side. Outer apical angle of anterior tibiae prolonged .. .. PAMBORINI.
9. (8) Mandibles unarmed on inner side. Outer apical angle of anterior tibiae not prolonged .. .. CARABINI.
10. (1) Middle coxal cavities entirely enclosed by the sterna, epimera of the mesosternum not attaining the coxae .. .. CARABIDAE CONJUNCTAE.
11. (32) Anterior coxal cavities with a single opening inwards CARABIDAE UNIPERFORATAE.
12. (17) Head with one supraorbital seta on each side. Posterior marginal seta of prothorax, if present, distant from basal angle. Anterior tarsi in ♂, if with vesture beneath, usually with fourth joint clothed —often intermediate tarsi also with vesture beneath
13. (16) Posterior marginal seta of prothorax present, distant from basal angle.
14. (15) Antennae with three basal joints glabrous; also fourth joint, at least near base. Vesture of tarsi in ♂, if present, spongiose BROSCINI.
15. (14) Antennae with three basal joints glabrous; fourth joint setulose. Four joints of anterior tarsi in ♂ biseriately squamose beneath. AGONICINI.
16. (13) Posterior marginal seta of prothorax wanting. ♂, if with tarsal vesture, usually with fourth joint clothed (vesture either spongiose or biseriate) .. .. HARPALINI.
17. (12) Head normally with two supraorbital setae on each side. Posterior marginal seta of prothorax, if present, near basal angle. Anterior tarsi in ♂, if with vesture beneath, never with more than three basal joints clothed—intermediate tarsi never with vesture beneath.
18. (23) Mandibles with a sensitive seta in scrobe of outer side. Antennae with not more than two basal joints glabrous. Anterior tarsi in ♂ not clothed beneath on more than two basal joints.
19. (22) Palpi not subulate.
20. (21) Elytra with margin interrupted posteriorly by an internal plica. Maxillary palpi with penultimate joint setulose. (Tarsi hairy above.) MERIZODINI.
21. (20) Elytra with margin not interrupted posteriorly by an internal plica. Maxillary palpi with penultimate joint glabrous .. .. .. TRECHINI.
22. (19) Palpi subulate .. .. BEMBIDIINI.
23. (18) Mandibles usually without a sensitive seta in scrobe of outer side. Antennae with three basal joints glabrous. (If mandibles with a sensitive seta in scrobe, then three joints of antennae glabrous—except genus *Pterogmus* with third joint setulose, but with three basal joints of anterior tarsi biseriately squamose beneath in ♂.)
24. (25) Prosternum with intercoxal declivity of prosternum projecting backwards in the form of a wedge. Paraglossae corneous, small, triangular, much shorter than ligula. (Large black species 29-34 mm. in length.) .. .. CUNEIPECTINI.
25. (24) Prosternum with intercoxal declivity not triangularly produced backwards. Paraglossae membranous
26. (27) Elytra with an inner plica near each side, usually visible at apical sinuosities .. .. PTEROSTICHINI.

27. (26) Elytra without an inner plica.
28. (29) Head not constricted at base to a condyliform neck. Prothorax depressed, wider than head. (Pro-episterna not visible at sides from above.) .. .. ANCHOMENINI.
29. (28) Head—except very rarely—narrowed behind eyes. Prothorax narrow, very rarely wider than head.
30. (31) Tarsi with ungues simple .. .. ODACANTHINI.
31. (30) Tarsi with ungues pectinate .. .. CTENODACTYLINI.
32. (11) Anterior coxal cavities with two openings inwards CARABIDAE BIPERFORATAE.
33. (58) Head without antennal grooves beneath.
34. (37) Mandibles with a sensitive seta in scrobe of outer side.
35. (36) Elytra truncate. Prothorax bordered at sides; sutures of prosternum visible .. .. BRACHYNINI.
36. (35) Elytra entire at apex. Prothorax constricted to a narrow base; lateral border and sutures of prosternum not visible. (Body pedunculate, scutellum on peduncle. Maxillary palpi very long and narrow.) .. .. APOTOMINI.
37. (34) Mandibles without a sensitive seta in scrobe of outer side
38. (39) Clypeus emarginate, or excised, exposing basal membrane of labrum.
39. (38) Clypeus entire, not exposing basal membrane of labrum. LICININI.
40. (45) Elytra with an inner plica near each side visible at apical sinuosities.
41. (42) Head with two supraorbital setae on each side. Apical joint of maxillary palpi obliquely set on to penultimate joint .. PANAGEINI.
42. (41) Head with one supraorbital seta on each side. Apical joint of maxillary palpi normally set on to penultimate joint.
43. (44) Elytra with ninth interstice variable in width, never linear or situated in a furrow below plane of eighth interstice .. .. CHLAENIINI.
44. (43) Elytra with ninth interstice linear and placed in a furrow .. OODINI.
45. (40) Elytra without an inner plica on each side.
46. (47) Tibial spurs long, serrulate on lower edge of outer side. TETRAGONODERINI.
47. (46) Tibial spurs short, not serrulate.
48. (51) Penultimate joint of labial palpi bisetose on anterior margin.
49. (50) Mentum supported at base by a raised submentum .. .. .. LEBIINI.
50. (49) Mentum not divided from gulae by a raised submentum. PENTAGONICINI.
51. (48) Penultimate joint of labial palpi plurisetose on anterior margin.
52. (55) Antennae with basal joint very long, longer than two succeeding joints together.
53. (54) Mentum narrowly united to submentum, base of maxillae unusually exposed. Prothorax not bordered. Elytra without usual border and inflexed margin .. .. DRYPTINI.
54. (53) Mentum widely united to submentum. Prothorax and elytra with lateral borders .. .. ZUPIINI.
55. (52) Antennae with basal joint not of unusual length, not as long as two succeeding joints together.
56. (57) Ligula corneous; paraglossae well developed, free, membranous PHYSOCRATOPHINI.
57. (56) Ligula wide corneous; paraglossae adherent to ligula, often rudimentary .. .. HELLUONINI.
58. (33) Head with distinct, usually long antennal grooves beneath PSEUDOMORPHINI.

CARABIDAE DISJUNCTAE.

CARABIDAE CLAUSAE.

Tribe Migadopini.

Form elongate; prothorax subquadrate, widest before middle, anterior angles obtuse, not prominent; head not deeply set in prothorax .. .. CALYPTOGONIA.
Form short oval; prothorax widest at base, anterior angles acute, projecting forward to base of eyes; head deeply set in prothorax .. .. .. STICHONOTUS.

CALYPTOGONIA, gen. nov.

Apterous. Head large, convex, not narrowed behind eyes, one supraorbital seta on each side; eyes round, convex, not inclosed behind, distant from buccal fissure; gular sutures wide apart. Labrum wide, emarginate, 6-setose. Clypeus wide, truncate; angles rounded; sides covering upper basal angles of mandibles. Mandibles short, wide, strongly rounded externally; scrobe short, asetose; inner side with a triangular denticulate prominence behind middle; apex acute. Maxillae with outer lobe 2-jointed, stout; inner lobe slender, strongly falcate, apex acute, inner side pluridentate (about six or eight teeth equally distant from one another, the odd teeth spiniform). Maxillary palpi rather long; second joint stout; two apical joints slender, apical a little longer than penultimate, truncate. Mentum short, trisinuate, median sinuosity wide, shallow; sinus strongly bordered in middle; lobes rounded at apex. Ligula corneous, wide, convex, truncate, bisetose; paraglossae cartilaginous, of same length as and adherent to ligula; external angles rounded and bearing about four minute setules. Labial palpi with penultimate joint rather short, bisetose; apical joint long (a half longer than penultimate joint), club-shaped, compressed, truncate. Antennae setaceous; four basal joints glabrous, first stout, hardly as long as second and third together, unisetigerous, second a little shorter than fourth, third a little longer than second and fourth; joints 5-11 about equal, longer than third. Prothorax transverse; base emarginate, wider than apex; lateral margins asetose; lateral border thick. Elytra connate, truncate-oval, convex, bordered at base, striate; ten striae before apical declivity, second stria extending backwards to beginning of apical declivity; no dorsal umbilicate punctures; apical margin rounded, not sinuate or interrupted by an internal plica on each side. Scutellum short, wide. Prosternum with anterior coxal cavities closed; intercoxal declivity not prominent, narrow. Mesosternum with epimera reaching coxae. Metasternum short; episterna short, wide, posterior margin oblique; epimera not visible. Legs moderate: posterior coxae contiguous; anterior tibiae short, incrassate, two short stout spinules externally at apex, inner side strongly emarginate, inner spur distant from apex; posterior tibiae elongate, slender. Tarsi: posterior long, slender; anterior in ♂ with four basal joints dilatate and with spongiose tissue beneath, second and third joints much wider than first and fourth; intermediate about as long as tibiae, two basal joints dilatate and spongiose beneath. Genotype, *C. ater* Sl.

CALYPTOGONIA ATER, sp. nov.

Oblong, convex, black. Head large, convex (2.7 mm. across eyes), without sculpture. Prothorax broader than long (2.7 × 3.6 mm.), widest about middle, lightly narrowed to base, smooth; sides lightly arcuate; apex (2.5 mm.) narrower than base (3 mm.) truncate, bordered on each side, angles obtuse, hardly prom-

inent; base emarginate, not bordered, angles obtuse; lateral border thick, sharply defined by a narrow sulcus; median line lightly impressed. Elytra ovate (7 × 4.8 mm.), convex; ten well marked striae on each elytron becoming obsolescent just before apex, second obsolete on apical declivity; interstices lightly convex, lateral interstice seriate-punctate. Under surface impunctate. Length 11—13.5, breadth 4.15—5.2 mm.

Hab.—Magnet (Lea), Cradle Mountain, Strahan (Carter and Lea). A numerous series of specimens has been examined, collected by Messrs. Carter and Lea in January, 1918, but Mr. Lea first found this species at Magnet many years ago.

Genus STICHONOTUS.

STICHONOTUS PICEUS Sloane.

Hab.—Mount Wellington (Lea), Cradle Mountain (Carter and Lea).

Two specimens from Cradle Mountain, sent by Mr. Carter, are of shorter and more oval form than the others, resembling in shape *S. leai* Sl. more than *S. piceus*, with which I consider it conspecific.

STICHONOTUS LEAI Sloane.

Hab.—Magnet (Lea), Waratah (Carter).

Tribe Scaritini.

Ligula small, prolonged, narrow and bisetose at tip; paraglossae free, small, narrow, pointed. Base of maxillae not covered by mentum. Basal joint of antennae unisetose .. .. *Group* CLIVINIDES.

Ligula broad, corneous; paraglossae corneous, ciliate at apex. Mentum broad and concealing at sides base of maxillae. Basal joint of antennae asetose *Group* CARENIDES.

Group *Clivinides*.

Genus CLIVINA.

Table of Tasmanian species.

1. (2) Elytra with four inner striae free at base, fifth joining sixth at base. (Elytra with a black sutural stripe.) .. .. *suturalis* Putz.
2. (1) Elytra with three inner striae free at base, fourth joining fifth at base.
3. (4) Clypeus with median part projecting beyond lateral parts, angular at sides. Anterior tibiae 4-dentate externally .. .. *heterogena* Putz.
4. (3) Clypeus with anterior margin emarginate, lateral parts not divided from median part. Anterior tibiae 3-dentate externally.
5. (6) ♂. Upper external tooth of anterior tibiae well developed. Prosternum without pectoral nodules .. .. *vagans* Putz.
6. (5) ♂. Upper external tooth of anterior tibiae obsolete. Prosternum with a distinct pectoral ridge on each side ending anteriorly in a nodule *dilutipes* Putz. var. *tasmaniensis* Sl.

CLIVINA SUTURALIS Putzeys.

[= *C. verticalis* Putz.: = *C. dorsalis* Blackb. (1889).]

My view is that the three names mentioned above have all been given to one species. By an error I cited it as *C. discoidalis* Blackb. in 1904.

Hab.—Hobart, Sandford (Lea). Also found in Southern and S.W. Australia.

CLIVINA HETEROGENA Putzeys.

(= *C. angustula* Putz.; = *C. deplanata* Putz.)

Hab.— Swansea (Simson); Latrobe (Lea). Widely spread in S.E. Australia.

CLIVINA VAGANS Putzeys.

In 1904 I applied the name *C. vagans* Putz., to a specimen from Tasmania sent to me by Blackburn, and I still support this identification. It differs from *C. dilutipes* Putz., var. *tasmaniensis* Sl. by ♂ with anterior tibiae more strongly dentate, prosternum without pectoral nodules.

Hab.—Strahan (Lea).

CLIVINA DILUTIPES Putzeys, var. TASMANIENSIS Sloane.

In 1896 I wrongly identified *C. dilutipes* and *C. lepida*; my *C. lepida* was *C. dilutipes* Putz., and my *C. dilutipes* of 1896 is now *C. misella* Sl. The variety *tasmaniensis* differs from the typical *C. dilutipes* of the mainland by the shape of the anterior tibiae in ♂;—the digitations are more reduced, the upper very feeble (practically obsolete), the penultimate greatly reduced; apical spur longer and more obtuse at apex; in ♀ (as in *C. dilutipes*) the digitations are more developed than in ♂, and the apical spur is pointed. The prosternum in ♂ bears on each side before the coxae a well developed ridge, ending anteriorly in a small nodule; this nodule is not found in ♀.

Hab.—Launceston, East and West Tamar, Great Lake, Swansea, Evandale (Simson, No. 2620); Latrobe (Lea).

Group *Carenides.*

Clypeus with intermediate angles obtuse; not marked; lateral seta placed inwards from intermediate angles. Anterior tibiae with penultimate external tooth placed distad from apical spur .. .. SCARAPHITES.

Clypeus with intermediate angles prominent, triangular; later seta placed outwards from intermediate angles. Anterior tibiae with penultimate external tooth placed basad from apical spur .. .. CARENUM.

SCARAPHITES ROTUNDIPENNIS Dejean.

Hab.—Kelso, Swansea, Georgetown (Simson, No. 1791); King Is., S.E. Australia, Lord Howe Is.

CARENUM MOROSUM Sloane (1907).

A species with anterior tibiae bidentate, and elytra impunctate. It suits neither the description nor the figure of *C. politulum* Westw., which was described as coming from Tasmania, it has not the posterior angles slightly emarginate. Both the description and figure of *C. politulum* suggest a species closely resembling *C. laevigatum* Macleay, but having the elytra impunctate, so that it may be an impunctate form of *C. laevigatum*; I have seen a *Carenum* from the mainland with impunctate elytra that I could not distinguish from *C. laevigatum.*

Hab.—George's Bay (Simson, No. 2313).

Note.—*C. morosum* is very close to *C. laevipenne* Macl., but has the border of the prothorax much more raised at the posterior angles.

CARENUM LAEVIGATUM Macleay.

A specimen not differing from the form of *C. laevigatum* found in Victoria.

Hab.—Launceston (Simson).

CARABIDAE APERTAE.

Tribe Carabini.

CALOSOMA SCHAYERI Erichson.

(? = *C. australe* Hope; = *C. grandipenne* Castelnau.)

The description of *C. australe* Hope reads as if founded on a rather discoloured specimen of *C. schayeri.*

Hab.—Launceston, Flinders Is. (Simson); King Is. (Lea); widely distributed in Australia.

Note.—*C. oceanicum* Perroud [= *C. walkeri* Waterhouse (1898)]. I cannot differentiate *C. walkeri* (N.W. Australia) from *C. occanicum* (New Caledonia).

CARABIDAE CONJUNCTAE.

CARABIDAE UNIPERFORATAE.

Tribe Broscini.

Table of Tasmanian genera.

1. (2) Suborbital cicatrix present (obsolete only in Tasmanian species of the *P. tasmanicus* group). Elytra with four lateral punctures, penultimate puncture giving off a short stria (sides pluripunctate only in *P. viridiaeneus).* (Mandibles with a seta in scrobe of outer side.) PROMECODERUS.
2. (1) Suborbital cicatrix wanting. Elytra pluripunctate along sides.
3. (6) Head transversely impressed behind eyes and with strong divergent frontal impressions; one supra-orbital seta on each side; antennae moniliform; mandibles short. Mes-episterna narrow.
4. (5) Mandibles with a seta in scrobe of outer side .. .. EURYLYCHNUS.
5. (4) Mandibles without a seta in scrobe of outer side .. CHYLNUS (nom. nov.)
6. (3) Head very large, transverse and frontal impressions obsolete; three supra-orbital setae and one or two punctures on vertex on each side; antennae long, slender. Mes-episterna wide. ♂. Anterior femora not protuberant on lower side. .. .. PERCOSOMA.

Genus PROMECODERUS.

Table of Tasmanian species.

1 (2) Elytra pluripunctate along sides;—about eight or ten punctures extending from shoulders to apex .. .. *viridiaeneus* Sl.
2 (1) Elytra quadripunctate on sides:—one puncture posthumeral, the others on apical third, penultimate strioliform.
3 (14) Head with a distinct suborbital cicatrix.
4 (5) Apex of abdomen in ♂ with three setigerous pores, set in a triangle, in ♀ with two setigerous pores on each side of apex. ♂.—Anterior femora strongly and suddenly dilatate basad from middle of lower side; ventral segments 3—5 piliferous. Length, 13-15 mm. *brunnicornis* Dej.
5 (4) Apex of abdomen in ♂ with one, in ♀ with two setigerous pores on each side of apex. ♂.—Anterior femora not suddenly dilatate; ventral segments with only the two usual ambulatorial setae.
6 (13) Legs dark.
7 (12) Dorsal surface convex. ♂.—Two or three basal joints of middle tarsi with vesture beneath.

8 (9) Impressions of ventral segments linear. Posterior tarsi with apical joint wide at base, subparallel on sides. ♂.—Two basal joints of middle tarsi with vesture beneath. Length, 13-16 mm. *gibbosus* Gray.

9 (8) Impressions of ventral segments foveiform. Posterior tarsi with apical joint elongate, narrow at base. ♂.—Three basal joints of middle tarsi with vesture beneath.

10 (11) Prothorax with border subsinuate before basal angles, these subrectangular, very slightly obtuse. Length, 15 mm. .. *cordicollis* Sl.

11 (10) Prothorax with border arcuate to base, basal angles open. Length, 12-13 mm. .. .. *bassi* Cast.

12 (7) Dorsal surface depressed. ♂.—Intermediate tarsi naked beneath; anterior tarsi with four joints clothed beneath. (Head strongly impressed across vertex; ♂.— Posterior tibiae curved.) Length, 12-14 mm. .. .. *curvipes* Sl.

13 (6) Legs testaceous. (Cupreous. ♂.—Middle tarsi naked beneath.) Length, 7.5—9 mm. .. .. *cuprescens* Sl.

14 (3) Head with suborbital cicatrix obsolete. ♂.—Middle tarsi naked beneath.

15 (16) ♂.—Four joints of anterior tarsi with vesture beneath. Length, 11 mm. .. .. *longus* Sl.

16 (15) ♂.—Three joints of anterior tarsi with vesture beneath.

17 (18) Prothorax with sides roundly curved to base, basal angles open. Length, 10 mm. .. .. *lasmanicus* Cast.

18 (17) Prothorax with sides obliquely curved to base, basal angles obtuse but marked. Length, 8.5-10.5 mm. .. .. *plebius* Sl.

PROMECODERUS SUBDEPRESSUS Guer.

I only know *P. elegans* Cast., from the Melbourne district, as a species which suits Putzeys' description of *P. subdepressus* Guer. Putzeys' treatment of the two species *P. subdepressus* and *P. elegans* in his "Revision" of 1873 leaves the impression on my mind that only one species was before him. I have not seen any species from Tasmania that is *P. subdepressus* Guer.

PROMECODERUS MODESTUS Cast.

This species is said by Castelnau to be from Tasmania. Castelnau's description might apply to *P. longus* Sl., but, in his Revision, Putzeys, with Castelnau's single specimen (♀) before him, says it has the basal angles of the prothorax rectangular. I have not seen it from Tasmania, or the mainland.

PROMECODERUS VIRIDIAENEUS Sloane (1915).

Hab.—Stanley, Zeehan (Simson, No. 3465); Cradle Mountain, Strahan, Waratah (Carter and Lea).

PROMECODERUS BRUNNICORNIS Dejean.

(= *P. degener* Guer.)

A variable species in size and appearance. I attribute to it all Tasmanian specimens with the basal angles of the prothorax very wide (open), and which have in the ♂ the following characters:—Ventral segments 3—5 plurisetose in middle, apical segment with three setigerous punctures on each side, placed triangularly (two of the punctures marginal); anterior femora suddenly dilatate on

lower side (usually armed with a denticule); posterior trochanters very long and obtusely pointed; anterior tarsi with four, intermediate with two joints clothed beneath. Length, 11—14.5 mm.

Hab.—Denison Gorge, Ben Lomond (Simson No. 3052); Strahan (Carter and Lea); Marrawah, Wilmot, Sheffield, Burnie, Devonport, Ulverstone (Lea).

Var. OVICOLLIS Cast. I can only regard *P. ovicollis* Cast., as a variety of *P. brunnicornis* Dejean, from which it differs by its more convex form, reddish antennae, ♂ with anterior femora less swollen beneath, and with the denticule obsolete; posterior femora less ampliate on lower side, posterior trochanters stouter and shorter.

Hab.—Launceston, Great Lake (Simson, No. 3091); Hobart (Lea).

PROMECODERUS GIBBOSUS Gray.

(= *P. mastersi* Macleay.)

Distinguished by its convex form, sharply marked basal angles of prothorax, strongly striate elytra, fourth and fifth ventral segments with a transverse linear impression on each side. Length, 13—16 mm. I cannot now differentiate *P. mastersi* Macl., of the mainland from the Tasmanian *P. gibbosus*.

Hab.—Launceston, Brighton, Avoca, Hobart (Simson, No. 1166); Ulverstone (Lea).

PROMECODERUS CURVIPES, sp. nov.

Elongate-oval, depressed; head transversely impressed across vertex; prothorax oval, depressed, abruptly declivous to basal angles, these open; elytra oval, depressed on disc, lightly striate, interstices depressed, a little undulate; ventral segments 4- 6 foveolate on each side. Bronzed—or aeneous—black; head and prothorax nitid, rather virescent; inflexed margins of elytra rather cupreous; undersurface and femora nitid, virescent; tibiae, tarsi, and antennae piceous brown.

Head large (2.75 mm. across eyes); vertex convex; eyes round, convex; postocular part of orbits well developed, about one half size of eyes. Prothorax rather oval (4 × 3.9 mm.), widest about anterior third; sides lightly rounded; apex wide, lightly emarginate; anterior angles a little prominent, not near neck; disc depressed; a wide, shallow, transverse impression before base; basal angles obtuse, placed beneath a lateral declivity; border narrow, wider anteriorly than posteriorly, obsolete on middle of base; median line lightly impressed. Elytra oval (7.5 × 4.5 mm.), depressed (but not flat) on disc, a little declivous to peduncle, wide across base, lightly rounded on sides; striae light, rather crenulate, seventh and eighth obsolete. Apical ventral segment in ♂ with one, in ♀ with two setae on each side of apex.

♂.—Anterior femora club-shaped, not suddenly inflated or dentate on lower side; posterior tibiae arcuate on lower side, wide at apex, densely fringed with setae on apical half of lower side: anterior tarsi with four joints wide and spongiose beneath; intermediate tarsi narrow, not clothed beneath. Length, 12—14, breadth, 4.2—4.5 mm.

Hab.—Tasmania (Simson, No. 3111).

Fourteen specimens have been examined. In appearance it resembles *P. brunnicornis* Dej.; but differs by basal angles of prothorax more overlapped by the sides of the segment, and less widely open; and by the following very distinct characters of the male:—anterior femora not suddenly and greatly dilatate and dentate on lower side; posterior trochanters shorter; posterior tibiae bent in-

wards and fringed with hair on lower side; intermediate tarsi narrow, not spongiose beneath; ventral segments not pilose in middle. It is allied to *P. longus* Sl., from which it differs by size larger, curvature and hair-fringe of lower side of posterior tibiae in male.

PROMECODERUS CUPRESCENS, sp. nov.

Elongate-oval, rather depressed; prothorax oval-cordiform, lateral border narrow, obsolescent near base; elytra oval, finely crenulate-striate; anterior femora not greatly swollen on lower side; ♂, anterior tarsi with four joints dilatate and spongiose beneath, intermediate tarsi without spongiose tissue beneath. Cupreous, under surface aeneous; legs ferruginous, femora darker than tibiae; antennae fuscous, base testaceous.

Head cupreous, eyes convex, prominent, lightly inclosed behind; temporal cicatrix distinct. Prothorax broader than long (2.3 × 2.5 mm.), depressed, more or less subfoveate; base strongly bordered on each side; lateral border narrow, reduced and almost obsolete just before base; sides very declivous to basal angles, these rectangular. Elytra oval (5 × 3 mm.), lightly convex; striae distinct (less so near sides), a little crenulate; interstices depressed, more or less feebly undulate; three posterior lateral impressions foveiform, penultimate one not giving off a striole. Ventral segments 3—5 without lateral foveae or sulci; apical segment in ♂ 1-, in ♀ 2-setose on each side of apex. Length, 7.5—9, breadth, 3—3.25 mm.

Hab.—Cradle Mountain, Waratah (Carter and Lea). A good series of specimens.

A very distinct species, differing from all others by the following characters in conjunction:—small size, coppery colour, and light-coloured legs. From *P. tasmanicus* Cast. (which also has the intermediate tarsi naked beneath in ♂), it differs by colour, prothorax less transverse, less rounded on sides, basal angles much lower down on sides, and not so obtuse, elytra less convex. There are some foveae on the prothorax which vary in number and distinctness; usually four are more or less distinct; two about equidistant from median line and border at widest part of segment, and two others behind these about level with end of median line —sometimes two other foveae may be noticed, one on each side of the median line at the middle of its length.

PROMECODERUS LONGUS, sp. nov.

♂.—Depressed, elongate. Upper surface aeneous or nigro-aeneous; under surface nitid, of a greenish bronzy colour, inflexed margins of elytra aeneous; tarsi, palpi, and antennae reddish.

Head with suborbital cicatrix obsolete; eyes prominent; post-ocular part of orbits about one third length of eye, curving continuously with eye. Prothorax depressed, as long as broad (3.1 × 3.1 mm.), lightly rounded on sides, lightly and widely transversely impressed near base, declivous to basal angles, these obtuse; a light rounded impression on each side a little before middle. Elytra oval (6.5 × 4 mm.), depressed, lightly striate, discal striae crenulate, lateral striae obsolete; humeral angles marked. Ventral segments 3—5 with a lightly impressed rounded fovea on each side; apical segment with one seta on each side at apex. Anterior femora club-shaped, lower side not sharply inflated or dentate; anterior tarsi with four joints wide and spongiose beneath; intermediate tarsi narrow, not clothed beneath. Length, 11, breadth, 4 mm.

Hab.—Launceston, Zeehan (Simson).

There were two specimens in the Simson Coll. without number. It is of evidently larger size and narrower form than the species which I identify as *P. tasmanicus* Cast.; both prothorax and elytra much less strongly rounded on sides; anterior tarsi in male with four, not three, joints clothed beneath. It cannot be *P. subdepressus* Guer. by basal angles of prothorax not rectangular—as said by Putzeys.

PROMECODERUS TASMANICUS Castelnau.

I attribute the name *P. tasmanicus* to a species given to me by the late Mr. George Masters, ticketed "Tasmania"; this specimen evidently represents the form with a wide prothorax referred to by Castelnau. The following description will enable it to be recognised:—

Nigro-virescent; inflexed margins of elytra aeneous; under surface with slight virideseent reflections; anterior tarsi and palpi reddish. Elliptical-oval, rather depressed. Head with suborbital cicatrix obsolete; eyes convex, prominent; post-ocular part of orbits about one third length of eye. Prothorax broader than long (2.7 × 3 mm.), cordiform-oval, strongly rounded on sides, lightly transversely depressed across base, declivous to basal angles, these obtuse. Elytra oval, declivous to peduncle, rather strongly and roundly declivous to apex; disc lightly striate; humeral angles marked. Anterior tarsi with three joints clothed beneath; intermediate tarsi not clothed beneath. Length, 10.2, breadth, 3.7 mm.

Specimens received from Mr. Lea ticketed "Mount Wellington" only differ slightly, as under:—♂, colour black; form narrower; both prothorax and elytra less strongly rounded on sides. Length, 10.5; proth., 2.75 × 2.85; breadth, 3.6 mm. This is probably the narrow form referred to by Castelnau. *P. tasmanicus* was not represented in the Simson Coll.

PROMECODERUS PLEBIUS, sp. nov.

Elliptical-oval, lightly convex; head with suborbital cicatrix obsolete; prothorax with basal angles obtuse, but marked; elytra oval, convex, striate on disc. Black; legs piceous; tarsi and antennae piceous red.

Head ordinary (2 mm. across eyes). Prothorax lightly convex, subcordate, as long as broad (2.7 × 2.7 mm.), widest about anterior third, lightly rounded on sides; sides narrowed in a gentle curve to base; basal area with a shallow, rather rounded impression on each side; border narrow, well developed on each side of apex and base; basal angles set low down, open but marked. Elytra oval (5.5 × 3.5 mm.); striae well marked on disc, obsolete on sides. Ventral segments 4—6 with a shallow impression on each side. ♂.—Anterior tarsi with three joints clothed beneath; intermediate tarsi not clothed beneath. Length, 8.5—10, breadth, 3.3—3.8 mm.

Hab.—Ben Lomond, 5000 feet (Simson). Six specimens.

I separate *P. plebius* from *P. tasmanicus* Cast., by shape more convex, especially of prothorax, which is less strongly rounded on sides, and with basal angles set lower down, and more marked, though obtuse; even should it be regarded as a variety of *P. tasmanicus*, its separation under a varietal name seems advisable.

Genus EURYLYCHNUS.

EURYLYCHNUS FEMORALIS Sloane (1915).

A black species apparently only differing from the genus *Chylnus* (= *Lychnus* Putzeys) by the presence of a mandibular seta. Prothorax sinuate on sides before base, basal angles marked. Length, 14 mm.

Hab.—Denison Gorge (Simson No. 3413); Mount Horror (Lea).

Genus CHYLNUS, nom. nov.

Lychnus Putzeys.

The name *Lychnus* was already in use when Putzeys proposed it in 1868; I now suggest *Chylnus* (formed by a rearrangement of the letters in *Lychnus*) to replace it.

CHYLNUS ATER Putzeys.

(= *Lychnus striatulus* Bates, = *L. strangulatus* Bates.)

I have identified a specimen in my collection as *Lychnus ater* Putz., with every likelihood of the identification being correct, seeing that a comparison with specimens in the Howitt Coll. named "*Mecodema tasmanicum* Castelnau" showed it to be the same species; Putzeys in his "Revision" of 1873 notes that there were nine specimens in the Castelnau Coll. under the name *Mecodema tasmanicum* —a cabinet name. I conclude that *Chylnus ater* Putzeys = *Lychnus striatulus* Bates, and that *L. strangulatus* Bates (numbered 3051 in the Simson Coll.) is a larger and smoother form; specimens in the Simson Coll. (No. 3684), and also taken by Messrs. Carter and Lea at Wilmot and Waratah, evidently represent the convex third species alluded to by Bates (Cist. Ent., 1878, p. 318), but I am not prepared to distinguish it from *Chylnus ater*, nor can I separate *Lychnus strangulatus* Bates by any definite characters. The species seems a variable one in size and appearance, the sides of the prothorax have one or two setae just before the middle, and from two to six setae near the anterior angles. Length, 16—20, breadth, 5.5—6.6 mm. One dwarfed specimen, 15.5 × 4.7 mm.

Hab.—Launceston, Denison Gorge, Ben Lomond, 4000 feet (Simson No. 3051); Zeehan (Simson), Wilmot, Waratah (Carter and Lea) [Simson, No. 3684]; Great Lake (Simson).

Genus PERCOSOMA.

The genus *Percosoma* is a distinct one characterised by head large, mandibles long, decussate; antennae elongate, second joint longer than fourth; prothorax plurisetose along sides, lateral border not attaining base; elytra with fifth interstice punctate; mes-epimera wide; posterior tarsi a little compressed, fifth joint narrow, vertical on sides (this character occurs also to a more marked degree in some genera of Scaritini, *e.g.*, *Scaraphites*).

Elytra sub-striate, interstices flat. Length, 25—27 mm. . . . *carenoides* White.
Elytra strongly striate, interstices convex on sides. Length, 24-35 mm.
sulcipenne Bates.

PERCOSOMA CARENOIDES White.

Hab.—Mount Wellington (Simson, No. 2727).

PERCOSOMA SULCIPENNE Bates.

Hab.—Denison Gorge, Wynyard (Simson, No. 3463); Cradle Mountain, Waratah (Carter and Lea).

Tribe **Agonicini**, trib. nov.

I place between the tribes Broscini and Harpalini a new tribe which is required for two Tasmanian species in the Simson collection; the following will be the definition of this tribe.

Head with one supra-orbital puncture on each side; mandibles long, decussate; scrobe of outer side asetose. Antennae inserted under a lateral ridge, slender;

basal joint long, scapiform; three basal joints glabrous. Labrum emarginate, 4-setose. Mentum toothed. Palpi elongate; apical joints setose, of labial securiform. Prothorax suboval; basal angles obtuse; two marginal punctures on each side, anterior at apical, posterior at basal third. Elytra convex, oval, striate; disc impunctate; scutellar striole very short, at base of first interstice; margin not interrupted posteriorly by an inner plica. Anterior coxal cavities with a single opening inwards. Mes-epimera not reaching coxal cavities; met-episterna quadrate, not divided from epimera. Legs long: anterior tibiae emarginate beneath; upper spine at inner side of emargination. ♂.—Anterior tarsi with four joints dilatate and biseriately squamose beneath; fourth joint of anterior and intermediate tarsi emarginate; posterior tarsi long, narrow, fourth joint triangular, simple.

AGONICA, gen. nov.

Head narrow; front depressed, smooth, lightly bi-impressed; one seta above middle of eye on each side; eyes prominent, hemispherical, not inclosed at base, distant from buccal fissure beneath. Labrum wide, short, emarginate, 4-setose. Clypeus not divided from front by a visible suture, bisetose. Mandibles long, acute, decussate, without a seta in scrobe of outer side. Mentum with a prominent triangular median tooth. Palpi elongate: labial with penultimate joint long, slender, bisetose; apical joint widely securiform, setulose: maxillary long, slender; two apical joints setose; terminal joint fusiform, stouter and a little longer than penultimate, compressed, blunt at apex. Antennae setaceous, rising at apex of a marginal ridge; basal condyle visible; basal joint long, nearly as long as three succeeding joints together; three basal joints glabrous; second and fourth joints much shorter than third. Prothorax oval, depressed; basal angles rounded; two marginal setae on each side, anterior at apical third, posterior at basal third. Elytra oval, convex, not bordered across base, lightly striate; striae well marked on disc, faint towards sides; margin not interrupted posteriorly by an internal plica. Body shortly pedunculate; scutellum on peduncle. Prosternum with coxal cavities closed behind; mes-epimera not reaching coxae: met-episterna quadrate, no visible suture between episternum and epimeron. Anterior coxal cavities with one opening inwards. Ventral segments without transverse sulci; apical segment in ♂ with two marginal setae on each side. Legs long: femora—anterior a little compressed, swollen: intermediate roundly swollen on lower side about anterior third; posterior lightly swollen on lower side; tibiae—anterior emarginate beneath, a sharp spur above emargination, apical spur short, stout; posterior slender, spurs short. ♂.—Anterior tarsi with four basal joints dilatate, biseriately squamulose beneath; fourth joint of four anterior tarsi short, emarginate, of posterior tarsi triangular, simple; upper surface of tarsi sparsely setose.

AGONICA SIMSONI, sp. nov.

Elliptical, convex; mandibles prominent, decussate; labrum short, emarginate, 4-setose; antennae with basal joint elongate (longer than two succeeding joints together); front strongly bi-impressed; eyes convex, distant from buccal fissure beneath. Black.

Head narrow (1.3 mm. across eyes); frontal impressions wide; lateral setae of clypeus at anterior extremity of frontal impressions; clypeal suture obsolete. Prothorax hardly broader than long (2 × 2.1 mm.), not declivous to base in

middle, laevigate (some faint transverse striolae crossing median line); anterior angles wide, hardly prominent; sides arcuate; base truncate, angles rounded; border narrow; marginal channel narrow; lateral basal foveae short, shallow. Elytra oval (4 × 2.8 mm.), convex, strongly declivous to apex, striate; five inner striae well marked on disc; striae 6—8 obsolescent on sides, eighth deeply impressed posteriorly; interstices not convex, third impunctate; lateral border narrow, reaching peduncle Length, 7.5, breadth, 2.8 mm.

Hab.—Zeehan (Simson). Unique.

AGONICA OVALIPENNIS, sp. nov.

Elliptical-oval; head bi-impressed; prothorax quadrate-oval, basal angles obtuse, posterior marginal seta at basal third; elytra oval, striate on disc, lateral striae obsolete, two inner interstices convex near base, third impunctate. Black.

Head narrow (0.8 mm. across eyes); vertex convex; front depressed, bi-impressed; impressions extending on to clypeus; clypeus declivous to anterior margin; lateral seta very near outer angle, outside (not in) anterior extremity of frontal impression. Prothorax as long as broad (1.2 × 1.2 mm.), laevigate; anterior angles wide, hardly advanced; sides evenly and lightly arcuate; base truncate, angles rounded off; border narrow, extending round basal angles; marginal channel narrow; median strongly impressed. Elytra oval (2.6 × 1.8 mm.), lightly convex; humeral angles rounded; apical curve subsinuate on each side; four inner striae well marked, fifth faint, 6—8 obsolete on sides, eighth deeply impressed posteriorly. Length, 4.5, breadth, 1.8 mm.

Hab.—Lottah (Simson No. 3120).

A single specimen was in the Simson collection; it differs from *A. simsoni* Sl., by smaller size, less convex form, lateral setae of clypeus not in frontal impressions, &c.

Tribe **Harpalini.**

Table of Tasmanian genera.

1 (8) Labial palpi with penultimate joint plurisetose. (Elytra fully striate, eyes distant from buccal fissure beneath. ♂.—If with four anterior tarsi squamose beneath, then four joints clothed with dense tissue beneath.)

2 (5) Posterior tarsi long; first joint as long as, or longer than two succeeding joints together.

3 (4) Elytra with at least third interstice pluripunctate .. GNATHAPHANUS.

4 (3) Elytra with third interstice unipunctate .. .. DIAPHOROMERUS.

5 (2) Posterior tarsi short; first joint short, not as long as two succeeding joints together.

6 (7) Sinus of mentum with a median tooth .. .. HYPHARPAX.

7 (6) Sinus of mentum without a median tooth .. .. .. CENOGMUS.

8 (1) Labial palpi with penultimate joint bisetose. (In *Amblystomus* some other feebly developed setules also.)

9 (12) Labium with paraglossae overlapping one another in front of ligula; mentum edentate.

10 (11) Elytra with first stria present, or interrupted near base, or obsolete,—if present, bent outwards near base and a scutellar striole present on first interstice,—if interrupted, scutellar striole obsolete or nearly so. ♂.—Four anterior tarsi either with or without vesture beneath. AMBLYSTOMUS.

11 (10) Elytra with first stria bent inwards near base, scutellar striole wanting. ♂.—Anterior tarsi without vesture beneath. .. .. HAPLANER.

12 (9) Labium with paraglossae free at apex; mentum dentate. (Elytra fully striate.)

13 (14) Ventral segments (including basal fovea in ♂) glabrous. Posterior tarsi long, first joint much longer than second. ♂.—Four anterior tarsi with joints 2-4 wide, clothed with dense tissue beneath NEMAGLOSSA.

14 (13) Ventral segments (including basal fovea in ♂) setulose. Posterior tarsi short, first joint not as long as two succeeding joints together. ♂.—Four anterior tarsi with squamae disposed biseriately at sides of joints .. .. EUTHENARUS.

Genus GNATHAPHANUS.

GNATHAPHANUS ADELAIDAE Castelnau.

Hab.—Launceston, Brighton, Great Lake, Avoca, Hobart. Flinders Is. (Simson No. 2481).

Genus DIAPHOROMERUS.

Table of Tasmanian species.

1 (8) Elytra with humeral angles marked and dentate, third interstice unipunctate.

2 (7) Legs black, or with tibiae and tarsi piceous; antennae black, or infuscate with basal joint ferruginous.

3 (4) Prothorax with sides not sinuate posteriorly, basal angles obtuse (Colour bronze, or viridiaeneous) .. .. .. *edwardsi* Casteln.

4 (3) Prothorax with sides sinuate posteriorly, basal angles square.

5 (6) Colour virescent. Length, 7 mm. .. .. *rectangulus* Chaud.

6 (5) Colour black. Length, 8 mm. .. .. *quadricollis* Chaud.

7 (2) Tibiae, tarsi, and antennae ferruginous. (Scutellar striole punctiform). Length, 6.5 mm. .. .. *viridipennis* St.

8 (1) Elytra with humeral angles not dentate, third interstice impunctate. (Prothorax densely punctate on each side of base, sides strongly sinuate to base, basal angles rectangular. Length, 9.7-10.5 mm. *perater* Sl.

Note.—*D. amaroides* Casteln. (= *Harpalus patruelis* Casteln. = *H. vandiemensis* Casteln. = *H. illawarensis* Casteln., according to Chaudoir) is also reported from Tasmania; but, not having seen it from the island, I have thought it better not to include it in the table from specimens of the mainland. It is distinguished by its ferruginous tibiae and tarsi.

DIAPHOROMERUS EDWARDSI Castelnau.

Bronzed, or bronzy-green; legs black; basal joint of antennae testaceous. Length, 8.5 mm. I consider this species to be conspecific with *D. edwardsi* Casteln., a species about which little is yet known.

Hab.—Falmouth (Simson), Stonor (Lea). Also occurs in Victoria.

DIAPHOROMERUS RECTANGULUS Chaudoir.

A viridescent species with basal angles of prothorax rectangular. Length, 6.5—7 mm.

Hab.—Brighton (Simson, unique). Also found in south-eastern Australia.

Diaphoromerus quadricollis Chaudoir.

A specimen which I identify as *D. quadricollis* Chaud., from the description, has been sent to me by Mr. Lea for examination.

Deep black; prothorax with sides lightly sinuate before base, basal angles square but obtuse at summit, lateral basal impressions impunctate; elytra with puncture of third interstice more distant from apex than usual. Length, 8.5 mm.

Hab.—Zeehan (Lea).

Diaphoromerus viridipennis, sp. nov.

Oval, convex; head large, eyes prominent, lightly inclosed at base, mentum toothed; prothorax transverse, wider across base (2 mm.) than apex (1.5 mm.), basal angles obtuse; elytra ovate, convex, strongly and fully striate, second interstice with a very short striole at base, third interstice with a puncture about posterior third, humeral angles dentate; undersurface glabrous; abdomen in ♂ with a well marked, median, basal, shallow impression; point of prosternum sparsely setulose; first joint of hind tarsi long, about as long as two succeeding joints together; ♂.—Four anterior tarsi dilatate, joints 1—4 densely clothed with squamae beneath, the squamae arranged in longitudinal rows. Black, nitid; elytra bluish green; femora piceous; tibiae, tarsi, antennae, and palpi ferruginous.

Head convex, not narrowed behind eyes (1.5 mm. across eyes); post-ocular part of orbits small, rising obliquely but abruptly from head. Prothorax laevigate, convex, broader than long (1.6 × 2.2 mm.), roundly and decidedly narrowed to apex, very lightly and obliquely narrowed to base; apex lightly emarginate, angles obtuse; base truncate, angles obtuse but marked; median line obsolescent; border entire. Elytra shortly truncate-oval (4 × 2.8 mm.), convex, strongly declivous to apex; apical curve short, hardly sinuate on each side; interstices subconvex, narrow and convex at apex; ninth interstice wide and with a double row of punctures towards apex. Length, 6.5, breadth, 2.8 mm.

Hab.—Hobart (Lea). The type specimen belongs to Mr. Lea, and another is in my collection, given to me by Mr. H. J. Carter, who found it at Hobart.

A small species, not like any other species of the genus *Diaphoromerus*; in general appearance it resembles a species of *Hypharpax*, but is at once distinguished from the species of that genus by the form of the posterior tarsi, which have the basal joint much longer—longer than the elongate inner apical spur of the tibiae.

Diaphoromerus perater, sp. nov.

Oval, convex, form robust; head large; prothorax transverse, strongly sinuate on sides posteriorly, basal half closely punctate on each side, basal angles rectangular; elytra strongly striate, interstices convex, third impunctate, humeral angles marked but not dentate. Black.

Head large (2.65 across eyes), convex; front obliquely depressed to anterior margin; clypeus transversely impressed behind anterior margin between lateral setae; clypeal suture distinct, linear, giving off at each end an obliquely divergent line extending across frontal depression towards eye; left mandible hooked, projecting beyond labrum, right mandible folded under labrum and left mandible. Prothorax broader than long (2.3 × 3.4 mm.); base truncate, wider (3 mm.) than apex (2.7 mm.); sides rounded anteriorly, sinuate posteriorly and meeting base at right angles; anterior angles a little prominent, obtuse; basal angles rectangu-

lar; upper surface depressed and with a light wide concavity on each side of base, closely and finely punctate towards base and along sides to marginal seta; a distinct curved anterior transverse line distant from anterior margin; median line short, not deep; marginal channel wide; border reflexed on sides, entire on base, extending almost to middle on each side of apex. Elytra ovate (6.2 × 4.5 mm.), lightly convex; base wide, truncate; apical curve lightly sinuate on each side; striae deep; striole at base of second interstice elongate; interstices convex, strongly so on apical declivity. Posterior tarsi with basal joint almost as long as two succeeding joints together. Length, 9.7—10.5, breadth, 4.2—4.5 mm.

Hab.—Tasmania (Simson Coll. No. 3686); Hobart, Huon River, Barnie (Lea); Warburton, Victoria (Sloane).

A very distinct species, which it seems only necessary to compare with *Harpalus moestus* Dej., a species which I refer to *Hypharpax* on account of its short posterior tarsi. Compared with *H. moestus*, it is larger; head more depressed anteriorly; prothorax with basal angles more sharply rectangular, anterior angles more prominent, lateral channel wider, base more depressed on each side, puncturation of basal parts finer, denser, and overspreading more of the surface; elytra less convex, basal border much less prominent at shoulders, striae deeper, scutellar striole much longer, interstices more convex, third impunctate (in *H. moestus* unipunctate above apical declivity); posterior tarsi longer; first joint of antennae black—not ferruginous.

Genus HYPHARPAX.

Table of Tasmanian species.

1 (2) Elytra with third interstice unipunctate on apical declivity. ♂.—Posterior femora strongly and sharply dilatate, dentate or subdentate on lower side. (Prothorax with basal angles very obtuse.) .. .. .. *peroni* Cast.

2 (1) Elytra with third interstice unipunctate above apical declivity. ♂.—Posterior femora not strongly dilatate on lower side.

3 (4) Prothorax with basal angles obtuse (though a little marked), not punctate on each side of base, except in bottom of basal impressions. (Tibiae dull red with apex piceous). Length, 5.7–7 mm. *australis* Dej.

4 (3) Prothorax with basal angles well marked, punctate on each side of base.

5 (6) Prothorax with sides oblique to base. Elytra lightly convex; humeral angles not dentate. Colour obscure, bronze; tibiae ferruginous, piceous at apex. Length, 6.5—7 mm. .. .. *aereus* Dej.

6 (5) Prothorax with sides sinuate before base, basal angles square. Elytra very convex; humeral angles dentate. Colour black, legs black .. *moestus* Dej.

HYPHARPAX PERONI Castelnau.

[= *H. novae-hollandiae* Cast., = *H. inornatus* Blackb. (*non* Germar).

= *H. latiusculus* Chaudoir, = *H. punticauda* Bates.]*

I identify specimens from Launceston in the Simson collection as *Hypharpax peroni* Cast., a species which Blackburn, from South Australian specimens, identi-

* I am indebted to Mr. H. E. Andrews, of London, for the information that Chaudoir's name was published before Bates's.

fied as *Harpalus inornatus* Germ., though Chaudoir had in 1878 put *H. inornatus* Germ., as a synonym of *Harpalus australis* Dej. I believe that on this question Chaudoir was right. The Simson collection contains specimens which are evidently *H. puncticauda* Bates, by their heavier form, prothorax more rounded on sides, and trochanters obtuse at apex (not almost straight on outer side nearly to apex and truncated in a curve from inner side); this is the same thing, from description, as *H. latiusculus* Chaudoir, but seems to me conspecific with a specimen from Launceston, which I cannot differentiate from *H. peroni* of the mainland; therefore, I feel unable to consider *H. puncticauda* Bates as a variety, but this is a point that can only be settled by careful collecting throughout Tasmania. The sharpness of the angulation of the lower side of the femora in ♂ varies in degree in Tasmanian specimens, as in other species of the genus; in the specimen from Launceston referred to above, it is shortly dentate. In length Tasmanian specimens vary from 6.7 to 8 mm., and vary in colour from a dull copper-colour to almost black. It was numbered 2478 and 2483 in Simson collection, but I cannot differentiate the specimens so numbered.

Hab.—Launceston, Brighton, Evandale, Longford, Interlaken (Simson); Parattah, Stonor, Hobart (Lea). Widely spread in Australia.

HYPHARPAX AUSTRALIS Dejean.

Hab.—Launceston, Evandale, Great Lake (Simson, No. 2484); Stonor, Mount Wellington (Lea); Lord Howe Island (Lea). Widely spread in S.E. Australia.

HYPHARPAX AEREUS Dejean.

Hab.—Hobart (Lea). Southern coastal districts of Australia.

HYPHARPAX MOESTUS Dejean.

Hab.—Brighton (Simson, No. 2881); Hobart (Lea). Also reported from Melbourne.

Genus CENOGMUS.

CENOGMUS ROTUNDICOLLIS Castelnau.

Hab.—Tasmania (Lea). Very widely distributed over Australia.

Genus AMBLYSTOMUS.

Erichson, Kaf. Mark. Brandb., i., p. 59, 1837; *Hispalis* Rambur, Faun. Andal., p. 135, 1842; *Megaristerus* Nietner, Ann. Mag. N.H., 1858, p. 427; *Notophilus* Blackburn, Trans. Roy. Soc. S. Aust., 1887, p. 185; Proc. Linn. Soc. N.S. Wales, 1889, p. 1250; *Thenarotidius* Sloane, *op. cit.* 1898, p. 461; *Psilonothus* Sloane, *op. cit.*, 1899, p. 557.

All authors have not been in agreement as to the position of the genus *Amblystomus;* for Erichson, Lacordaire, Bates, Ganglbauer, and Tschitscherine its place was in the tribe Harpalini; for Schaum, in the Lebiini; for Bedel and Apfelbeck in the Lieinini; in the European Catalogue of 1906 it is placed in a special tribe; I believe it to represent a group in the tribe Harpalini. The genus is here used in a wide sense, the genera *Notophilus, Thenarotidius* and *Psilonothus* being included in it. Of these, *Thenarotidius* is unquestionably a synonym, and I do not know definite reasons for maintaining *Notophilus* and *Psilonothus* as distinct. *Notophilus* has the clypeus and labrum symmetrical, but the want of symmetry in

Amblystomus varies so considerably that I do not think this a character on which the genus should be founded. The clypeus and labrum cannot be said to be asymmetrical in *Psilonothus*, and *Ps. oralis* Sl., has naked tarsi in ♂, but a species described below, *A. convexus*, is evidently congeneric with *Ps. oralis*, yet has the four anterior tarsi in ♂, lightly dilatate and squamulose beneath.

Table of Tasmanian species.

1 (4) Met-episterna elongate; elytra striate near suture, puncture of third interstice before apical declivity; eyes near buccal fissure beneath. Winged.

2 (3) Prothorax arcuate to base, basal angles rounded, not marked. Length, 3.3-3.5 mm. .. .. *niger* Blackb.

3 (2) Prothorax decidedly and obliquely narrowed to base; basal angles obtuse, but marked. Length, 2.3-2.5 mm. .. .. *parvus* Blackb.

4 (1) Met-episterna (excluding epimera) quadrate; elytra without striae on disc, puncture of third interstice on apical declivity; eyes distant from buccal fissure beneath. Apterous.

5 (6) ♂ with four anterior tarsi squamulose beneath. Length, 4–4.5 mm. *convexus* Sl.

6 (5) ♂ with anterior tarsi naked beneath. Length, 2.5—3mm. *oralis* Sl.

AMBLYSTOMUS (NOTOPHILUS) NIGER Blackburn.

Hab.—Evandale (Simson No. 3122); Latrobe, Jordan River, Strahan, Mount Wellington (Lea). Common in South-eastern Australia.

AMBLYSTOMUS (NOTOPHILUS) PARVUS Blackburn.

Hab.—Launceston, Evandale, Zeehan (Simson, No. 2877); Jordan River (Lea). South Australia.

AMBLYSTOMUS CONVEXUS, sp. nov.

Apterous, oval, convex; prothorax with lateral margin narrow; elytra smooth, a fine puncture at position of third interstice near apical fifth; met-episterna wide, short, quadrate—including epimera longer than broad; posterior tarsi with first joint as long as three succeeding joints together. ♂.—Abdomen at apex bisetose on each side; four anterior tarsi with joints 1—4 lightly dilatate and squamulose beneath. Olivaceous-black; basal joint of antennae and tibiae testaceous-brown.

Head smooth; labrum, clypeus and front shagreened, and showing some minute punctures under a lens; eyes round, convex, distant from buccal fissure beneath; mentum edentate. Prothorax smooth, convex, transverse—cordate (1.1 × 1.4 mm.); base wide; basal angles obtuse; lateral border narrow, more strongly reflexed at basal angles, entire on base. Elytra smooth, convex, oval (2.6 × 2 mm.); eighth stria obsolete; submarginal punctures wanting on middle of sides. Length, 4.1—4.4, breadth, 1.75—2 mm.

Hab.—Brighton (Simson, No. 2858). Also found by Mr. Lea at Lucindale and Port Lincoln, S. Australia.

A distinct species much larger than *A.* (*Psilonothus*) *oralis* Sl. Compared with *Amblygnathus minutus*, a species I also refer to *Amblystomus*, and to which it is allied, the prothorax narrowly bordered at once distinguishes it

AMBLYSTOMUS (PSILONOTHUS) OVALIS Sloane.

Hab.—Strahan (Carter and Lea). This species, which extends from N.S. Wales to Western Australia, was represented in the Simson collection by one specimen, without exact locality.

Genus HAPLANER.

HAPLANER VELOX Castelnau.

Hab.—Wedge Bay (Hardy). *H. velox* was sent to me by Mr. H. J. Carter, as having been found at Wedge Bay by Mr. Hardy. It is found in the southern coastal districts of Australia from Perth to Melbourne.

Genus NEMAGLOSSA.

Solier, Gay's Hist. Chili: Zool., iv., p. 215, 1848; *Lecanomerus* Chaudoir, Bull. Soc. Imp. Nat. Mosc., 1850, p. 446; *Thenarotes* Bates, Cist. Ent., 1878, p. 320.

I have examined a specimen of *Nemaglossa brevis* Solier (= *Lecanomerus marginatus* Reed) from Chili; and do not know how to distinguish the genus *Lecanomerus* from *Nemaglossa*, nor do I think that *Thenarotes* is (even on Bates's own showing) separable from *Lecanomerus*, except by trivial characters that are not of generic value; therefore these three genera are considered as one here.

Table of Tasmanian species.

1 (4) Form stout; upper surface black, rarely with a virescent tinge on elytra.
2 (3) Size major, 6.5–7 mm. Elytra nitid in ♂, opaque in ♀ *verticalis* Erichs.
3 (2) Size minor, 4.5 mm. Form oval, convex; elytra nitid in both sexes *mastersi* Macl.
4 (1) Form narrow; prothorax at least reddish.
5 (8) Head black; antennae infuscate after second joint.
6 (7) Elytra red at base; each elytron with a piceous plaga extending over interstices 2–8. Length, 5 mm. .. .. *bicolor* Sl.
7 (6) Elytra piceous; first interstice, apex, and lateral margin reddish. Length, 3.8–4.1 mm. .. .. *obtusa* Sl.
8 (5) Colour (including head and antennae) reddish; each elytron with a piceous plaga extending over interstices 2–5. Length, 5 mm *tasmanica* Bates.

NEMAGLOSSA (HARPALUS) VERTICALIS Erichson.

Hab.—Launceston (Simson, No. 2480), West Tamar (Simson, No. 3105); Devonport, Zeehan, Hobart (Lea). Common in the coastal districts of N.S. Wales and Victoria

NEMAGLOSSA MASTERSI Macleay.

(=*Acupalpus mastersi* Macl., = *Lecanomerus nitidus* Blackb.)

Hab.—Stanley, Stonor, King Is. (Lea). Also found over a large area of S.E. Australia.

NEMAGLOSSA (THENAROTES) BICOLOR Sloane.

Hab.—Launceston, Beaconsfield (Simson, No. 2492). Also found in Victoria and S. Australia.

NEMAGLOSSA OBTUSA, sp. nov.

Elongate-oval; head bifoveate; prothorax laevigate, punctate on each side of basal foveae; elytra truncate-oval (2.5 × 1.8 mm.), convex, fully striate, second interstice without striole at base, third interstice unipunctate a little before apical third. Head black; prothorax ferruginous, middle of anterior margin and disc vaguely infuscate; elytra piceous-black, first interstice, lateral margins and apex reddish; legs testaceous; antennae infuscate, two basal joints testaceous; mandibles and labrum reddish.

Head laevigate; each frontal fovea giving off an oblique line running towards middle of eyes; vertex convex; eyes prominent, lightly inclosed behind. Prothorax broader than long (0.9 × 1.2 mm.), widest before middle; sides lightly rounded, roundly and strongly narrowed to apex, decidedly narrowed to base; apex truncate; angles rounded, not marked; base truncate in a curve, angles obtuse, not marked; lateral basal foveae wide, shallow, punctate; median line distinct. Length, 3.8—4.1 mm., breadth, 1.8 mm.

Hab.—Evandale (Simson, No. 2494); Launceston, Latrobe, Strahan (Lea).

This is the species which is entered as *Thenarotes discoidalis* Blackb. in Lea's "List" of 1902, but I believe it to be a distinct species. Compared with *N. atriceps* (= *Trechus id* Macleay), it differs by prothorax more strongly narrowed to base, basal angles more rounded off. I am not sure that I know *N. minor* Blackb., which may not be different from *N. atriceps* Macl.; the same differences should separate *N. obtusa* from *N. minor* as from *N. atriceps*. It seems to me better to consider the Tasmanian species as distinct, rather than attach it to any of the described species of the mainland as a variety. All the allied forms known to me from the mainland differ from *N. obtusa* by having the prothorax less strongly narrowed to base, and with the basal angles more marked.

Two small specimens belonging to Mr. Lea, ticketed "Launceston" are smaller than the typical form (3.5 mm.) and have the elytra almost wholly black, only the first interstice towards apex, lateral margins posteriorly, and apex narrowly reddish; it may be a variety.

NEMAGLOSSA (THENAROTES) TASMANICA Bates.

Hab.—Launceston (Simson, No. 2491). Also common in S.E. Australia.

Genus EUTHENARUS.

Prothorax with basal angles rectangular; legs yellowish ..	*promptus* Erichs.
Prothorax with basal angles obtuse; legs black.	*nigellus* Sl.

EUTHENARUS (HARPALUS) PROMPTUS Erichson.

Hab.—Launceston, Beaconsfield, Kelso, Zeehan (Simson, No. 2859); Latrobe, Strahan, King Is. (Lea). Common in S.E. Australia.

EUTHENARUS NIGELLUS, sp. nov.

Elongate-oval; prothorax laevigate, sparsely punctate in basal impressions; elytra convex, fully striate, second interstice without striole at base, third interstice unipunctate near posterior third. Black; antennae piceous with basal joint reddish; legs black; tarsi ferruginous-brown, posterior darker than anterior.

Head laevigate; frontal impressions well marked, oblique, anterior extremities connected by clypeal suture; eyes not prominent. Prothorax broader than

long (1 × 1.3 mm); sides rounded, angustate to base; base arcuate-truncate, angles obtuse; border thick, extending round basal angles on each side; lateral basal fovea wide, shallow, punctulate. Elytra wider than prothorax (2.65 × 1.75 mm.), strongly declivous to apex; inner humeral angles widely obtuse; apical curve short, without lateral sinuosities; striae entire, fine but well defined, second rising from a rather large puncture; interstices depressed. Length, 4.2, breadth, 1.75 mm.

Hab.—Strahan (Lea). Unique.

Allied to *E. comes* Sl., from which it presents the following differences:—legs black; eyes less convex; prothorax more strongly narrowed to base, less densely punctate along base, particularly near angles.

Tribe **Merizodini**, trib. nov.

Antennae with second and third joints setulose; mandibles with a seta in groove of outer side; maxillary palpi with penultimate joint setiferous, apical joint glabrous. Elytra with margin interrupted posteriorly by an inner plica, eighth interstice carinate towards apex.

I have formulated this tribe for the Australasian species hitherto put in the genus *Oopterus*. Dr. R. Jeannel, of Toulouse, has examined the genotype, *Oopterus clivinoides* Guerin, and has kindly communicated to me the fact that not only is it not congeneric with the New Zealand species hitherto referred to as *Oopterus*, but actually belongs to another tribe of the Carabidae; this leaves the South American *Merizodus* as the first described genus of this tribe, and therefore the one from which the tribal name must be taken. The characters given above differentiate this tribe from the Trechini. The only extra-Australasian genus of the tribe known to me is *Merizodus*, the genotype of which, *M. angusticollis* Solier from Chili, I have examined.

Table of genera.

1 (8) Eyes large, prominent.
2 (7) Head with two supra-orbital setae on each side.
3 (6) Elytra bordered on base; prothorax without a submarginal carina.
4 (5) Facies *Oodes*-like. Prothorax with posterior marginal seta present. Brachydema.
5 (4) Facies *Harpalus*-like. Prothorax without posterior marginal seta Percodermus.
6 (3) Elytra not bordered on base; prothorax with a submarginal carina near basal angles, posterior marginal seta present .. .. Merizodus.
7 (2) Head with one supra-orbital seta on each side. [Prothorax with a submarginal carina and a marginal seta near basal angles; elytra with border obsolete except beside humeral angle.] .. Pterocyrtus.
8 (1) Eyes small, depressed. [Prothorax narrow, near basal angles concave and without submarginal carina; legs unusually long.] Idacarabus.

Genus Brachydema.

Brachydema tasmaniae Sl. (= *B. victoriae* Sl.)

I now believe I was wrong in trying to differentiate the Tasmanian and Victorian forms from one another.

Hab.—Denison Gorge (Simson No. 3126), Hobart (Lea); Warburton, Victoria (Sloane).

Percodermus, gen. nov.

Head small; frontal impressions obsolete; two supra-orbital setae on each side; eyes hemispherical, hardly inclosed at base, distant from buccal fissure beneath. Labrum truncate, 6-setose. Clypeus with a seta on each side. Mandibles with a seta in scrobe of outer side. Palpi stout: maxillary with penultimate joint obconic, setose; apical joint stout, short, obtusely pointed, glabrous; labial short; penultimate joint bisetose; apical joint short, stout, obtusely pointed. Antennae long, slender; second and third joints setulose. Prothorax depressed, subquadrate, wider across base than apex, lightly and roundly ampliate at widest part, bi-impressed on each side of base; basal angles rectangular, obtuse at summit; border narrow, passing round basal angles; submarginal basal carina not developed; posterior marginal seta wanting. Elytra rather depressed; base bordered; humeral angles marked, not dentate; striae lightly marked on disc, obsolete on sides; first interstice with a very short striole at base, third 4-punctate beside third stria, eighth carinate at apex, obsolete in middle. ♂.—Anterior tarsi with two basal joints lightly dilatate and squamose beneath.

The position of this genus is near *Pterocyrtus*, but it differs by form more depressed; head with frontal impressions obsolete, two supra-orbital setae on each side; prothorax without a submarginal basal carina, seta at basal angles wanting. The genotype is a small, jet-black, rather nitid beetle.

Percodermus niger, sp. nov.

Elliptical-oval, subdepressed. Black, nitid; legs and antennae piceous or piceous red, femora darker than tibiae, base of antennae reddish. Head short (1.3 mm. across eyes); front wide; eyes large, round, prominent. Prothorax subquadrate (1.5 × 2 mm.), widest just before middle, depressed: apex narrow (1.2 mm.), angles not prominent, rounded; sides arcuate anteriorly, subsinuate to base; base wide (1.7 mm.), truncate, angles rectangular, summit obtuse; border narrow, passing round both anterior and basal angles, very narrow in middle of apex, obsolete in middle of base; basal impressions shallow, inner one well marked, outer one short, distinct; space between these impressions wide, depressed. Elytra with disc lightly striate; sides smooth; third interstice 4-punctate, eighth carinate at apex, obsolete in middle; a short striole at base of first interstice. Tarsi setose on upper surface; basal joint of posterior tarsi as long as three succeeding joints together. Length, 6, breadth, 2.3 mm.

Hab.– Great Lake (Simson). Three specimens.

Pterocyrtus, gen. nov.

Head bi-impressed; impressions not divergent posteriorly; one supra-orbital seta on each side; eyes distant from buccal fissure beneath. Labrum truncate, 6-setose. Mandibles with a seta in scrobe of outer side. Mentum with sinus moderately deep, oblique on sides; a wide prominent median tooth. Ligula corneous, narrow, rounded at apex, bisetose in middle of apex; paraglossae narrow, free, hardly extending beyond ligula. Palpi stout; labial short; penultimate joint 2-setose in front, apical joint compressed, rather wide behind middle; maxillary with two apical joints short, wide at point of union; penultimate joint obconic, narrow at base, setose; apical joint angustate, obtuse at apex. Maxillae hooked, sparsely setose on inner side, outer lobe biarticulate. Antennae slender, not long; joints short, second and third about equal (third hardly longer than

second); joints 4—10 oval, moniliform, equal; basal joint only glabrous. Prothorax broader than long; two short impressions on each side of base; border narrow, terminating at basal angles; two marginal setae on each side, posterior seta at basal angle. Elytra convex; base not bordered; humeral angles marked; lateral channel terminating at humeral angle; margin interrupted posteriorly and with an internal plica; eighth interstice carinate at apex, an apical striole along inner side of carina. Metepisterna short; metepimera narrow, not distinct. Ventral segments corneous, first narrowly dividing posterior coxae; segments 3—6 with an ambulatorial seta on each side near middle; apical segment in ♂ unisetose, in ♀ bisetose on each side. Tarsi with a few setae on upper surface; ♂.—Anterior short; two basal joints triangular, a little dilatate, triangularly produced at inner apical angle, squamose on lower side. Genotype, *P. globosus* Sloane.

I am not sure whether the New Zealand species which are now referred to *Oopterus* are actually congeneric with *Pterocyrtus*, but they are certainly very closely allied.

Table of Species.

1 (6) Eyes convex, prominent; elytra strongly convex on disc.
2 (5) Prothorax widest before middle; sides lightly sinuate near base; a prominent, narrow, submarginal ridge at base.
3 (4) Size major. Elytra decidedly striate on disc. Length, 5–5.5 mm. *striatulus* Sl.
4 (3) Size minor. Elytra smooth. Length, 3.2—4 mm. .. *tasmanicus* Cast.
5 (2) Prothorax widest at middle; sides obliquely narrowed to base (base wide); submarginal basal ridge short, wide, lightly raised. Length, 4.3–5 mm. .. .. *globosus* Sl.
6 (1) Eyes small, round, not prominent; elytra not strongly convex on disc. (Colour reddish, elytra strongly striate on disc). Length, 4 mm. *rubescens* Sl.

PTEROCYRTUS STRIATULUS, sp. nov.

Apterous, oval, robust, convex; head wide, front with two elongate, rather irregular, parallel depressions; prothorax subquadrate, wider across base (1.4 mm.) than apex (1.1 mm.), a submarginal carina on each side of base; elytra oval, convex, punctate-striate on disc, striae 5—7 faint. Black, with a narrow reddish margin at apex; legs and antennae piceous red.

Head large (1.15 mm. across eyes); frontal impressions parallel, not outturned posteriorly; one supra-orbital seta on each side behind the convex lateral space; eyes convex, rather prominent. Prothorax broader than long (1.3 × 1.7 mm.), widest before middle, strongly angustate to apex, obliquely narrowed to base; sides subsinuate just before base; basal angles rectangular; basal foveae deep, bi-impressed; base truncate, sloping slightly forward on each side; submarginal carina narrow, well developed; lateral channel narrow and deep towards base; a seta in channel at basal angle; border narrow, reflexed. Elytra much wider than prothorax (3.5 × 2.7 mm.), strongly rounded on sides; humeral angles prominent, shortly subdentiform; basal border obsolete, but closing lateral channel at humeral angles; scutellar striole wanting; four inner striae well marked on disc, weaker on apical declivity, eighth strongly impressed; interstices a little convex on disc, third finely 3-punctate beside third stria, eighth carinate towards apex, ninth narrow, depressed. Length, 5—5.5, breadth, 2.4—2.7 mm.

Hab.—Cradle Mountain (Carter and Lea). Several specimens.

Note.—A specimen in the Simson collection from the Blue Tier is 4.8 mm. in length, and has a similar prothorax, but the elytra less strongly striate.

PTEROCYRTUS (DRIMOSTOMA) TASMANICUS Castelnau.

Brown; head, prothorax and margin of elytra reddish. Length, 3.2, breadth, 1.5 mm.

Hab.—Blue Tier (Simson, No. 3121). Two specimens.

This is likely *Drimostoma tasmanica* Cast., but seems smaller than the type form. Bates referred it to *Oopterus*.

Three specimens were in the Simson Coll. under No. 3121, which are a little larger and black in colour. Length, 3.6—4 mm. I believe they must go under *P. tasmanica*.

PTEROCYRTUS GLOBOSUS, sp. nov.

Apterous, subglobose; head large, lightly bi-impressed; prothorax transverse, wider across base (1.5 mm.) than apex (1.1 mm.); elytra subglobose, substriate on disc, smooth towards sides. Black; elytra with narrow lateral and wide apical testaceous margin; legs and antennae reddish.

Head wide, convex (1.2 mm. across eyes); frontal impressions parallel, short; eyes convex, prominent. Prothorax convex, broader than long (1.3 × 1.7 mm.), broadest just before middle, strongly angustate to apex, gently obliquely narrowed to base; basal angles rectangular; base truncate; two short basal impressions on each side (inner foveiform, outer narrow); a short rather wide submarginal carina near each basal angle; posterior marginal seta in lateral channel at basal angle. Elytra subrotundate (3 × 2.6 mm.); three inner striae marked towards base, first entire, eighth strongly impressed; third interstice finely 3-punctate along third stria, eighth shortly carinate at apex, ninth narrow, placed at bottom of the lateral channel. Length, 4.3—5, breadth 2.3—2.6 mm.

Hab.—Cradle Mountain, Waratah (Carter and Lea). A good series of specimens.

Differs from the black species in the Simson Coll., which I have referred above to *P. tasmanicus* Cast., by form shorter; prothorax shorter, more transverse, more ampliate at widest part, wider across base, lateral basal impressions not so deep and more distinctly divided into two foveae, lateral basal carina shorter, more distant from, and less parallel to the margin; elytra more ampliate, inner striae more distinct, sides and apex with a much more distinct ferruginous margin. From *P. striatulus* Sl., it differs almost by the same characters as from *P. tasmanicus*, and has the elytra much less strongly striate.

PTEROCYRTUS RUBESCENS, sp. nov.

Oval, convex; head with frontal channels not divergent posteriorly; prothorax subquadrate, basal angles rectangular; elytra oval, convex, crenulate-striate on disc, humeral angles marked, scutellar striole wanting, basal border obsolete inwards from fifth interstice. Reddish, sometimes becoming brownish on disc of elytra.

Head convex (0.7 mm. across eyes); frontal channels wide, parallel, extending backward to level with base of eyes, not out-turned at posterior extremity; eyes not prominent, small, round, lightly convex; a narrow lateral sulcus passing above eye and extending behind eyes on each side of head. Prothorax broader

than long (1 × 1.2 mm), broadest before middle, wider across base than apex; sides obliquely narrowed to base; apex truncate; base bisinuate (lightly rounded in middle, straight on each side); basal angles marked, rectangular, with summit blunted; border narrow; lateral basal impressions well marked; a short carina near each basal angle on inner side of marginal channel. Elytra oval (2.5 × 1.75 mm.), convex; five inner striae well marked on disc, becoming faint (except first) on apical declivity, lateral striae more feeble, eighth near margin; eighth interstice strongly carinate at apex, wide and declivous beneath this carina. ♂.—Tarsi with two basal joints dilatate, triangular at inner apical angle. Length, 4, breadth, 1.75 mm.

Hab.—Waratah (Carter and Lea).

Distinguished from other known Tasmanian species by eyes smaller, more depressed; form less robust; elytra much less convex and ampliate; colour reddish brown, &c.

Tribe **Trechini.**

Genus TRECHUS.

(*Sporades* Fauvel = *Trechodes* Blackburn.)

Table of Australian and Tasmanian species.

1 (32) Prothorax with base truncate.
2 (3) Head narrow, hardly constricted behind eyes; eyes small, depressed. Black. Length, 5 mm. .. .. *teai* Sl.
3 (2) Head decidedly constricted behind eyes; eyes convex, more or less prominent.
4 (19) Elytra with third puncture of third interstice on apical declivity.
5 (14) Form depressed, or subdepressed. Colour black, or with indeterminate pattern.
6 (9) Elytra with punctures of third interstice not interrupting the interstice. (Apical striole continuous with fifth stria. Black.)
7 (8) Elytra with border extending inwards on base to first interstice. Length, 5.7 mm. .. .. *pacificus* Sl.
8 (7) Elytra with border not extending inwards on base past third interstice. Length, 6.5-7 mm. .. .. *robustus* Sl.
9 (6) Elytra with anterior puncture of third interstice interrupting the interstice, or beside fourth stria.
10 (11) Elytra with interstices depressed. Piceous. Length, 5—5.5 mm. *diemenensis* Bates.
11 (10) Elytra with interstices convex. Bicolorous species.
12 (13) Prothorax with basal angles acute, preceded by a short sinuosity; elytra with basal border reaching first interstice. Length, 5.5 mm. *victoriae* Blackb.
13 (12) Prothorax with basal angles subrectangular, obtuse, not preceded by a sinuosity; elytra with basal border not reaching inward beyond fourth interstice. Length, 3.8 mm. .. .. .. *castelnaui* Sl.
14 (5) Form convex, elytra oviform. Black, elytra with a transverse fascia of testaceous maculae on posterior half, sometimes also a testaceous post-humeral lunule.
15 (16) Elytra without post-humeral maculae. Length, 4.3 mm *subornatellus* Blackb.
16 (15) Elytra with post-humeral maculae.
17 (18) Elytra strongly striate on disc, striae 2-4 strongly impressed on apical declivity; anterior discal puncture near third stria. Length, 3.3 mm. .. .. *carteri* Sl.

18 (17) Elytra substriate, striae 2–4 obsolete on apical declivity; anterior discal puncture near fourth stria. Length, 4.2 mm. .. .. *coxi* Sl.

19 (4) Elytra with third puncture of third interstice distant from apex, not on apical declivity.

20 (23) Elytra with striae 1—7 deeply impressed; interstices convex.

21 (22) Colour black, legs piceous. Length, 4 mm. .. .. *australinus* Sl.

22 (21) Colour piceous-testaceous, femora testaceous, tibiae light brown. Length, 3.8 mm. .. .. *simsoni* Blackb.

23 (20) Elytra striate on disc, striae becoming obsolete towards sides; interstices depressed.

24 (27) Elytra piceous-black, with a testaceous, post-humeral macula on each elytron.

25 (26) Prothorax with basal angles acute, preceded by a sinuosity. Length, 3.4 mm. .. .. *longinotatus* Sl.

26 (25) Prothorax with basal angles obtuse, not preceded by a sinuosity. Length 3.7 mm. .. .. *brevinotatus* Sl.

27 (24) Elytra black, without post-humeral maculae.

28 (31) Prothorax with sides obliquely narrowed to base; basal angles marked and with border prominent.

29 (30) Elytra subdepressed, sides lightly rounded. Length, 3 mm. *nitens* Putzeys.

30 (29) Elytra convex, sides strongly rounded. Length, 3.8 mm *blackburni* Sl.

31 (28) Prothorax with sides evenly rounded to base; basal angles obtuse, not marked nor with border prominent. Length, 3 mm. *tasmaniae* Blackb.

32 (1) Prothorax with base lobate.

33 (34) Prothorax with basal angles prominent, triangular, base truncate behind them on each side of lobe; each elytron with six punctate striae. Length, 4 mm. .. .. *baldiensis* Blackb.

34 (33) Prothorax with basal angles not prominent and triangular, base sloping behind them on each side of lobe; elytra with not more than three simple striae on each side of suture.

35 (36) Elytra with three inner striae marked. Length, 4 mm. *macleayi* Sl.

36 (35) Elytra unistriate on each side of suture.

37 (38) Head wide; prothorax transverse, depressed, lateral margin and channel wide, elytra depressed. Length, 3.5—4 mm. *bipartitum* Macleay.

38 (37) Head narrow; prothorax globose, lateral margin and channel narrow; elytra convex, a deep transverse-oblique foveiform impression at position of anterior discal puncture. Black, nitid. Length, 2.8 mm. .. .. *gibbipennis* Blackb.

I sent specimens of *Bembidium bipartitum* Macl., to Dr. R. Jeannel, of Toulouse, the present authority on the tribe Trechini, and have been informed by him that it belongs to *Sporades* of Fauvel (genotype, *S. serpunctatus* Fauv., New Caledonia), a genus which Dr. Jeannel informed me has also been found in the Oriental Region, and in East Africa. The genus *Trechodes*, founded by Blackburn on his *Bembidium secaloides*, must become a synonym of *Sporades*, for the only difference I can note between *Bembidium bipartitum* Macl., and *B. secaloides* Blackb., is one of colour (*B. bipartitum*, elytra piceous, head and prothorax red; *B. secaloides*, upper surface wholly piceous). The genus *Trechus* as used in this paper will include *Sporades* as a subgenus.

Blackburn has tabulated the Australian and Tasmanian species of *Trechus* known to him (Trans. Roy. Soc. S. Aust., 1901, p. 117). My idea of the genus

is wider than his, as including his *Trechodes,* and the table given above is on quite different lines from his.

Macleay has described as belonging to the genus *Trechus*, four species which must be excluded from it. These are *T. ater, T. atriceps*, and *T. concolor*, which are Harpalids, and *T. rufilabris* which is a species of *Perigona.*

To render my work more complete I have included in the table the species of the mainland, and have described a new species (*T. castelnaui*) from Victoria.

TRECHUS LEAI, sp. nov.

Elongate-oval, convex; head narrow, eyes small, depressed; prothorax broader than long, base truncate, basal angles obtuse; elytra oval, fully striate, eighth interstice narrow and raised at apex. Black; legs, antennae, and mouth-parts reddish.

Head convex, elongate (0.9 mm. across eyes), hardly narrowed behind eyes; frontal impressions long, parallel, deep; eyes small, round, depressed; post-ocular parts of orbits very little swollen, longer than eyes. Prothorax convex, subquadrate (1.3 × 1.5 mm.), broadest before middle, wider across base than apex; sides lightly rounded, obliquely narrowed to base, border wide, reflexed, prominent at basal angles; lateral basal impressions short, rather narrow, separated from marginal channel by a raised space. Elytra strongly convex, oval (3.2 × 2.2 mm.); interstices convex on disc, third with a foveiform puncture about anterior third, and another puncture beside second stria on posterior declivity. Length, 5, breadth, 2.2 mm.

Hab.—Cradle Mountain (Carter and Lea). Unique.

This species is very distinct from all other described Tasmanian species. By the form of its head, prothorax, and elytra it is allied to *T. subornatellus* Blackb., but can be distinguished easily from that species by larger size; head narrower with less prominent eyes; elytra without a pattern, etc.

TRECHUS PACIFICUS, sp. nov.

Elongate-oval, subconvex; head ordinary, eyes prominent; prothorax short, wide truncate at base, basal angles obtuse but marked; elytra oval, fully striate, apical striole continuous with fifth stria, basal border extending inwards to scutellum. Deep black, nitid; femora piceous; tibiae and tarsi reddish.

Head wide (1.2 mm. across eyes), front strongly bi-impressed; lateral and median spaces convex; eyes prominent; post-ocular parts of orbits about half the length of eyes; labrum emarginate. Prothorax transverse (1.2 × 1.8 mm), widest at middle, a little wider across base (1.45 mm.) than apex (1.3 mm.); apex lightly emarginate; anterior angles rounded; sides evenly rounded; border reflexed, prominent at basal angles; lateral basal impressions shallow, wide. Elytra oval (3.5 × 2.3 mm.), strongly striate; striae simple, eighth distinct; interstices depressed third 3-punctate (two anterior punctures foveiform, beside third stria, third on apical declivity beside second stria); interstices 6—8 united at apex to form a narrow pointed ridge. Length, 5.7, breadth, 2.3 mm.

Hab.—Strahan (Carter and Lea). Unique.

Allied to *T. robustus* Sl., but smaller; colour deeper black; femora piceous; eyes more prominent; post-ocular part of orbits smaller; prothorax proportionately wider, evenly rounded on sides, widest at middle, less emarginate on base, basal foveae shallower; elytra less convex, more decidedly bordered on base, border extending inwards past fourth interstice—(it is the only Tasmanian species showing this character).

TRECHUS ROBUSTUS, sp. nov.

Elongate-oval, subconvex; head large, eyes prominent; prothorax short, wide, truncate-emarginate at base, basal angles obtuse; elytra oval, fully striate, apical striole continuous with fifth stria. Piceous, elytra rather iridescent; reflexed and inflexed margins of elytra, legs, antennae, and mouth-parts reddish.

Head wide (1.5 mm. across eyes); vertex convex; front bi-impressed; lateral and median spaces convex; eyes roundly prominent; post-ocular part of orbits large, two-thirds length of eyes; labrum emarginate. Prothorax transverse (1.5 × 2 mm.), broadest before middle, a little wider across base (1.6 mm.) than apex (1.5 mm.); apex emarginate; anterior angles obtuse; sides lightly rounded; border wide, reflexed; lateral basal foveae wide, short, strongly impressed, bordered along posterior margin. Elytra oval (4 × 2.5 mm), rather convex; striae simple, third 3-punctate (two anterior punctures beside third stria, third beside second stria just below beginning of apical declivity); interstices 6—8 united at apex to form a narrow ridge; border not extending on base inwards past fourth interstice. Length, 6.5—7, breadth, 2.5—2.7 mm.

Hab.—Zeehan (Coll. Simson, type); Waratah (Carter).

Two specimens have been examined; it is the largest Australian species of the genus, and is allied to *T. pacificus* Sl.; under the description of *T. pacificus* will be found a note of the most obvious differences between these two species.

TRECHUS DIEMENENSIS Bates.

[= *T. solidior* Blackburn (1901).]

Hab.—Launceston, St Mary's (Simson, No. 3045); Waratah (Carter and Lea). "In moss and lichens," Lea.

I obtained specimens of a species of *Trechus* in a damp decaying log at Marysville, Victoria, in January; it agreed with the description of *T. solidior* Blackb.; but to me, it seems conspecific with *T. diemenensis;* specimens from Dorrigo, N.S.W., are larger, more shining, and smoother towards sides of elytra, but do not seem specifically distinct.

TRECHUS CASTELNAUI, sp. nov.

Broad, oval, subdepressed; head strongly bisulcate; prothorax transverse, wide across base; elytra fully striate, striae deep, disc bifoveolate on course of fourth stria, a hooked striole on each side of apex, marginal furrow and border not extending inwards along base beyond fourth interstice. Piceous; prothorax brown with disc piceous; elytra piceous, a lateral space and apex brownish testaceous (the lateral testaceous marking is a stripe occupying that part of seventh interstice opposite the interval between the discal foveae, and sending off a narrow transverse branch across sixth and fifth interstices just behind the level of the posterior fovea); femora brownish testaceous; tibiae, tarsi, and antennae brown; palpi testaceous.

Head large (0.8 across eyes); frontal furrows deep, curving outwards anteriorly and posteriorly; median space convex; eyes round, convex, coarsely faceted, orbits small behind eyes. Prothorax transverse (0.8 × 1.2 mm), subdepressed, wider across base than apex; sides lightly rounded, slightly obliquely narrowed to base; basal angles obtuse, subrectangular; base slightly obliquely truncate on each side, a little produced backward in middle; marginal channel wide; margin wide, explanate and reflexed at basal angles; basal foveae deep, divided from margin by a narrow ridge; median line deeply impressed. Elytra widely oval (2.2 × 1.8 mm.), depressed on disc, decidedly declivous on sides, rounded at

shoulders; striae deep, simple, first entire, curving round apex and extending forward opposite posterior extremity of sixth stria in a short deeply marked course hooked at extremity (about apical fifth); interstices rather irregular, convex towards sides, second wide towards apex, third ended considerably before apex by the union of third and fourth striae, interrupted by posterior discal fovea, fourth interrupted about basal fifth by anterior fovea. Length, 3.8, breadth, 1.8 mm.

Hab.—Victoria: Marysville and Warburton (Sloane).

One specimen obtained by me at Warburton, and another at Marysville in January, in damp, heavily wooded gullies.

Allied to *T. victoriae* Blackb., but differing by smaller size; darker colour; head less swollen at eyes; prothorax less rounded on sides, not sinuate before basal angles, these not acute; elytra similar, but with sculpture of the apical declivity different (*T. victoriae* without a hooked sublateral striole), marginal border not extending along base to peduncle as in *T. victoriae*. It is altogether different from *T. simsoni* Blackb., by facies; prothorax more transverse (not cordate), more widely margined; elytra more depressed, humeral angles more marked (in *T. simsoni* quite rounded off), anterior discal puncture interrupting fourth interstice, etc.

TRECHUS CARTERI, sp. nov.

Oval, convex; head large, eyes convex, orbits small behind eyes; prothorax subquadrate, base truncate, basal angles rectangular (a little blunted at summit); elytra oval, disc strongly striate, striae fainter towards sides.

Black; legs (tibiae darker than femora), base of antennae, and mouth-parts testaceous; prothorax piceous, reddish towards basal angles; elytra with yellowish markings as under:—(1) on apical margin and first interstice on apical declivity, (2) a post humeral oblique macula extending from fourth stria behind anterior discal puncture to margin, and reaching base at shoulder, (3) a small discal spot on third interstice at second puncture, (4) an irregular arcuate fascia from fourth stria to margin above apical declivity.

Prothorax broader than long (0.7 × 0.85 mm.), widest before middle, hardly wider across base than apex; sides lightly rounded, obliquely narrowed to base; lateral border not wide anteriorly, strongly reflexed towards base. Elytra widely oval (2 × 1.5 mm.), convex, four inner striae strongly impressed, eighth obsolete on sides, third interstice 3-punctate (two anterior punctures beside third stria, third on apical declivity beside second stria); eighth interstice carinate at apex, defined on inner side by the well marked apical striole. Length, 3.3, breadth, 1.5 mm.

Hab.—Cradle Mountain (Carter and Lea). Many specimens. "In moss and lichens," Lea.

Allied to *T. subornatellus* Blackb., from which it can be readily differentiated by size smaller; prothorax more strongly narrowed to base, border narrower; elytra with post-humeral maculae. From *T. coxi* Sl., which it resembles in pattern of elytra, it can be distinguished by smaller size; eyes smaller and less convex; prothorax much less transverse, more narrowed to base; elytra with striae strongly impressed on disc.

TRECHUS AUSTRINUS, sp. nov.

Elongate-oval, convex. Head rather wide, strongly arcuately bisulcate; prothorax subcordate, apex and base of about equal width, basal angles almost rec-

tangular; elytra oval, strongly striate, seventh and eighth striae weak, interstices 1—5 convex, third interstice 3-punctate beside third stria, apical striole in line with fifth stria. Black, legs and antennae reddish.

Head large (0.8 mm. across eyes), obliquely narrowed behind eyes (continuously with slope of eyes); vertex convex; frontal sulci curved, decidedly divergent and defining orbits posteriorly; eyes prominent; mandibles prominent; labrum emarginate. Prothorax broader than long (0.85 × 1.15 mm.); apex lightly emarginate; anterior angles obtuse, a little prominent; sides lightly rounded; base truncate, sloping lightly forward at each side; basal angles, sub-rectangular, summit obtuse; border strongly reflexed, not wide, hardly wider towards base; lateral channel curving round at basal angles and uniting with bottom of basal impressions, these deep; median line strongly impressed. Elytra oval (2.5 × 1.6 mm.), convex; humeral angles rounded off, not marked; interstices 6—8 uniting to form a narrow carina at apex, this carina defined on inner side by a strongly impressed apical striole; posterior puncture of third interstice level with anterior end of apical striole. Length, 4, breadth, 1.6 mm.

Hab.—Great Lake. Unique in the Simson Coll.

A very distinct species, not nearly allied to any other yet found in Tasmania. If the sides of the prothorax are viewed from straight above they appear to be lightly sinuate before the basal angles; but, if looked at from the opposite side across the segment, this sinuosity (which is caused by a slight horizontal curve of the border) disappears.

Trechus simsoni Blackburn (1894).

Hab.—Thomas Plains (Simson, No. 3506).

Trechus longinotatus, sp. nov.

Oval, robust; head large, arcuately bisulcate; prothorax cordate, narrower across base than apex, sides sinuate posteriorly, basal angles acute; elytra widely oval, weakly striate, third interstice 3-punctate, posterior puncture above apical declivity. Black; elytra with a humeral lunule, inflexed margin, apex, a small ante-apical spot, and apical part of first interstice lurid-testaceous; antennae infuscate, base reddish; legs testaceous, tibiae and tarsi brown.

Head finely shagreened, large (0.7 mm. across eyes), strongly narrowed behind eyes); vertex convex; frontal sulci curved, strongly divergent posteriorly; eyes convex, rather small, a little prominent; post-ocular part of orbits about as long as eyes, curving continuously with eyes to head. Prothorax broader than long (0.7 × 1 mm.); apex lightly emarginate; anterior angles obtuse, bordered, a little prominent; sides lightly rounded anteriorly, shortly sinuate before base; basal angles acute; base truncate; border narrow, reflexed, very little wider at basal angles; lateral channel curving round at basal angles to form bottom of basal impressions, these well marked; median line well marked on disc. Elytra oval (2 × 1.4 mm.) subconvex; base wide; basal curve short; discal striae lightly impressed, first only entire; striae 6—8 obsolescent; recurved apical striole narrow. Length, 3.4, breadth, 1.4 mm.

Hab.—Ben Lomond, 5000 feet (Simson). Unique.

With *T. brevinotatus* Sl., this species forms a distinct group. Comparing these two species with *T. monolobus* Putz., and *T. scapularis* Putz., from Chili, species which also have post-humeral maculae, it is at once seen that there is little affinity towards the Chilian species. The Tasmanian species have the head nar-

rower, more deeply bisulcate, eyes smaller and less prominent; elytra more striate, third puncture of the third interstice above the apical declivity. In *T. longinotatus* the elytra have, on each, a lurid testaceous humeral lunule extending from the sixth interstice at the humeral angle and curving inwards behind the anterior puncture of third interstice on to the fourth interstice, and there is an indistinct macula of a duller colour on the apical declivity beside the recurved striole.

TRECHUS BREVINOTATUS, sp. nov.

Oval; head large, arcnately bisulcate; prothorax cordate, hardly narrower at base than apex, sides roundly narrowed to base, basal angles obtuse; elytra oval, lightly striate, interstices depressed, third 3-punctate beside third stria, posterior puncture above apical declivity. Piceous-black; vertex, sides and base of prothorax (narrowly), border, inflexed margin, and first interstice (especially behind middle) reddish; apex (rather widely), and a rotundate humeral spot outside fifth interstice lurid-testaceous; antennae infuscate, base reddish; legs testaceous; tibiae and tarsi brownish.

Head large (0.7 across eyes); vertex convex; frontal sulci deep, lightly divergent posteriorly; post-ocular part of orbits small (not half size of eye), strongly raised from head; eyes large, convex. Prothorax broader than long (0.7 × 1 mm.); apex truncate; angles obtuse, not prominent; sides lightly rounded; base truncate; angles obtuse; lateral border narrow anteriorly, a little wider near base; lateral channel wide; lateral basal impressions well marked; median line distinct. Elytra oval (2.2 × 1.5 mm.), convex (a little depressed near suture); base wide; striae 1—5 lightly impressed, 6—8 obsoleseent. Length, 3.7, breadth, 1.5 mm.

Hab. Great Lake (Simson). Unique.

Allied to *T. longinotatus* Sl., from which it differs decidedly by eyes larger and more convex, orbits less developed behind eyes, frontal sulci less divergent posteriorly; prothorax with anterior angles less prominent, sides not sinuate before basal angles, these obtuse; elytra with shoulders more rounded off, post-humeral maculae shorter, not reaching backwards as far as anterior puncture of third interstice. The apical declivity is of a rather lurid-testaceous colour, but the dark ground colour extends well down the declivity.

TRECHUS NITENS Putzeys.

I have identified *T. nitens* Putz., from the description. Length, 3 mm.

Hab.—Mount Wellington (Lea); "in roots of grass at summit." Mr. Lea sent it to me, ticketed *T. tasmaniae* Blackb., which I believe to be an allied, but distinct, species.

TRECHUS BLACKBURNI, sp. nov.

Oval; head large; prothorax cordate; elytra rotundate-oval, convex. Black; inflexed margins of elytra, legs, mouth-parts, and antennae reddish.

Head ordinary (0.8 mm. across eyes). Prothorax cordate (0.8 × 1 mm.), widest before middle; base and apex of about equal width; sides rounded, obliquely narrowed to base; basal angles marked, obtuse; border strongly reflexed at basal angles; lateral basal impressions foveiform. Elytra widely oval (2.3 × 1.7 mm.), convex; base rotundate; disc striate; striae faint towards sides; apical striole in line with fifth stria (but not quite uniting with it); third interstice 3-punctate beside third stria, posterior puncture above apical declivity; interstices 6—8 uniting to form a ridge at apex. Length, 3.8, breadth, 1.7 mm.

Hab.—Cradle Mountain (Carter and Lea).

Allied to *T. nitens* Putz., which it closely resembles, but larger; prothorax more cordate; elytra more convex, wider, more strongly rounded on sides, more ampliate on each side of pedunele in a more evenly rounded curve. The wider, more convex, and more rotundate elytra are the most conspicuous differences. It differs from *T. tasmaniae* Blackb. by size larger; prothorax less rounded on sides, border prominent at basal angles, etc.

TRECHUS TASMANIAE Blackburn.

This species (as included in the table of species given above) has been identified from the description.

Hab.—Cradle Mountain (Carter and Lea).

TRECHUS BALDIENSIS Blackburn.

Hab.—Cleveland, Great Lake (Simson, No. 3312).

TRECHUS MACLEAYI, sp. nov.

Subdepressed; head wide, arcuately bisulcate, eyes prominent; prothorax subquadrate, base shortly lobate, posterior angles obtuse; elytra with three inner striae marked, others (including eighth) obsolete, recurved apical striole distinct, third interstice 3-punctate (two anterior punctures beside third stria, third puncture on apical declivity beside second stria), an elongate striole at base of first interstice, basal border reaching scutellum. Piceous; elytra with lateral channel, inflexed margin, and apex ferruginous; femora lurid-testaceous; tibiae and tarsi brown; antennae infuscate, basal joint reddish.

Head large (0.8 across eyes); frontal sulci deep, curved, strongly divergent posteriorly; median frontal space convex, not as wide as lateral spaces, these convex; supra-orbital punctures near eye, anterior set in a foveiform puncture; eyes hemispherical, large, prominent; postocular part of orbits laminate, strongly and abruptly raised from head. Prothorax broader than long (0.8 × 1 mm.), a little wider across basal angles than apex; anterior angles wide, rounded; apex truncate; sides lightly rounded; basal curve between posterior angles wide, bisinuate, curving forward from sinuosity to posterior angle on each side; basal lobe short, wide, rounded; lateral border narrow, rather widely reflexed beside basal angles; anterior transverse impression faint; base declivous on each side towards margin; posterior marginal seta on edge of border at posterior angle. Elytra subdepressed (2.5 × 1.7 mm.), laevigate outside discal foveae, wide at base; humeral angles rounded; sides subparallel (hardly rounded); two inner striae well marked, second not reaching apex, third faint. Length, 4, breadth, 1.7 mm.

Hab.—Cleveland (Simson, No. 3504). Unique. Grampian Mountains, Victoria (Mr. Ejnar Fischer).

A very distinct species allied to *T. bipartitum* Macl., from which it differs by larger size; darker colour; prothorax with posterior angles far less marked; elytra with more than one stria on each side of suture.

TRECHUS GIBBIPENNIS Blackburn (*Trechodes id.* Blackb.)

Hab.—Lake District (Blackburn), Grampian Mountains, Victoria. Mr. Ejnar Fischer has given me a specimen which I consider to be *T. gibbipennis* Blackb. It is altogether different from any other species known to me.

Tribe **Bembidiini.**

Table of Tasmanian genera.

1 (4) Elytra with a scutellar striole at base of first interstice; anterior tibiae not oblique at apex.
2 (3) Clypeus decidedly obliquely narrowed to apex .. .. .. BEMBIDIUM.
3 (2) Clypeus short, wide, hardly narrowed to apex .. .. .. CILLENUM.
4 (1) Elytra without a scutellar striole; anterior tibiae oblique above apex externally .. .. TACHYS.

Genus BEMBIDIUM.

BEMBIDIUM DUBIUM Blackburn.

Hab.—Cleveland (Simson, No. 3505).

Genus CILLENUM.

CILLENUM MASTERSI Sloane.

I cannot differentiate specimens in the Simson collection from specimens from Sydney. Ilfracombe ("on beach," Simson).

Genus TACHYS.

Table of Tasmanian species.

1 (4) Elytra with a submarginal stria on middle of sides (indicated by some punctures in Tasmanian species).
2 (3) Elytra 6-striate; prothorax strongly rounded on sides. Length, 2—2.2 mm. .. .. *semistriatus* Blackb.
3 (2) Elytra 5-striate; prothorax lightly rounded on sides. Length, 2.2 mm. *flindersi* Blackb.
4 (1) Elytra with submarginal stria obsolete on sides.
5 (6) Form short, oval, very convex; prothorax not perceptibly narrowed to base; elytra laevigate, unistriate on each side of suture, unipunctate on disc, apical striole well developed. Length, 2.2 mm. *bifoveatus* Macl.
6 (5) Depressed; prothorax evidently narrowed to base; elytra bipunctate on disc, apical striole obsolete. Length, 1.5–1.7 mm. *captus* Blackb.

All these species also occur on the mainland.

TACHYS SEMISTRIATUS Blackburn.

Hab.—Strahan (Simson), Latrobe, Jordan River, Hobart, King Is. (Lea).

TACHYS FLINDERSI Blackburn.

Hab.—Jordan River (Lea).

TACHYS BIFOVEATUS Macleay.

Hab.—West Tamar (Simson).

TACHYS CAPTUS Blackburn.

Allied to *T.* (*Polyderis*) *brevicornis* Chaud., of the northern hemisphere. I have not seen it from Tasmania, but Mr. Lea has recorded it in his "List" of 1902.

Tribe **Pterostichini.**

Table of Tasmanian genera.

1 (8) Mandibles with a seta in scrobe of outer side. (Nomini, Sloane, olim.)
2 (3) Elytra with eighth interstice not carinate at apex. ..Mecyclothorax.
3 (2) Elytra with eighth interstice carinate near apex.
4 (5) Intercoxal part of mesosternum narrow and excised at apex; met-episterna elongate .. .. Amblytelus.
5 (4) Intercoxal part of mesosternum wide and emarginate at apex; met-episterna short, quadrate.
6 (7) Antennae with third joint bearing a few fine setules besides usual apical setae .. .. Pterogmus.
7 (6) Antennae with third joint glabrous (except usual apical setae) .. .. Phersita.
8 (1) Mandibles without a seta in scrobe of outer side. (Pterostichini, *sensu stricto.)*
9 (24) Antennae with three basal joints glabrous.
10 (13) Ventral segments 4—6 transversely sulcate. (Scutellar striole of elytra, if present, at base of second interstice. Apterous.)
11 (12) Head with frontal sulci obsolete. (Elytra with three punctures on third interstice—all beside third stria.) .. .. Simodontus.
12 (11) Head with strongly impressed divergent frontal sulci .. Prosopogmus.
13 (10) Ventral segments without transverse sulci.
14 (21) Elytra with scutellar striole at base of first interstice.
15 (18) Apterous. (Elytra with third interstice punctate; met-episterna in Tasmanian species short.)
16 (17) Prothorax depressed across base, basal impressions wide, extending to lateral border .. .. Rhabdotus.
17 (16) Prothorax with basal impressions narrow, distant from lateral border. Notonomus.
18 (15) Winged. (Met-episterna elongate.)
19 (20) Elytra with third interstice 3-punctate (Two anterior punctures beside second stria, posterior puncture beside third stria) .. Pseudoceneus.
20 (19) Elytra with third interstice impunctate .. .. Chlaenioidius.
21 (14) Elytra without scutellar striole. Winged.
22 (23) Elytra with third interstice unipunctate near middle, pro-episterna laevigate .. .. Loxandrus.
23 (22) Elytra with third interstice impunctate; pro-episterna striolate Rhytisternus.
24 (9) Antennae with four basal joints glabrous. (Length exceeding 26 mm.) Catadromus.

I am now unable to support the separation of the genera with a seta in the outer scrobe of the mandibles from the great tribe Pterostichini: in the tribe Migadopini there is the genus *Rhytidognathus* with a mandibular seta, though usually it is wanting in the tribe, and many Broscides of Australia, Tasmania, and New Zealand are without the ordinary mandibular seta of the tribe Broscini.

Loxandrus gagatinus Castelnau was described from Tasmania, but I have not seen it.

Genus MECYCLOTHORAX.

MECYCLOTHORAX AMBIGUUS Erichson.

Hab.— Launceston, West Tamar, Evandale, Great Lake (Simson, Nos. 2493, 2612, 3473); King Is. (Lea); Cradle Mountain, Waratah (Carter and Lea). Occurs also in Australia (widely spread), and New Zealand.

Genus AMBLYTELUS.

Table of Tasmanian species.

1 (8) Upper surface unicolorous.
2 (7) Prothorax with basal angles obtuse, anterior marginal seta present.
3 (6) Prothorax with margin widely reflexed and bearing a seta at basal angles.
4 (5) Elytra with third, fifth, and seventh interstices seriate-punctate; striae strongly crenulate. Length, 7.5 mm. .. .. *striatus* Sl.
5 (4) Elytra with third and fifth interstices punctate, seventh impunctate; striae finely crenulate. Length, 8 mm. .. .. *simsoni* Sl.
6 (3) Prothorax with margin narrow and without a seta at basal angles. (Elytra with striae faint, or obsolete; third interstice only punctate). Length 7-8 mm. .. .. *niger* Sl.
7 (2) Prothorax with basal angles marked, anterior marginal seta wanting. (Third interstice of elytra impunctate.) Length, 4.5—5.5 mm. *placidus* Lea.
8 (1) Elytra black with two discoidal vittae and lateral margins testaceous. (Third, fifth and seventh interstices punctate, sutural black area reaching base.) Length, 8—11 mm. .. .. *curtus* Fabr.

My conception of the genus *Amblytelus* includes *Dystrichothorax* of Blackburn, which I believe to have been differentiated generically from *Amblytelus* on insufficient grounds. I do not know *Dyscolus australis* Erichs., and *D. dilatatus* Erichs., in nature.

AMBLYTELUS STRIATUS, sp. nov.

Oval; prothorax a little wider at base (1.5 mm.) than apex (1.35 mm.), rounded on sides, basal angles obtuse, two marginal setae on each side; elytra oval, wide, strongly punctate-striate, interstices 3, 5, and 7 bearing a series of setiferous punctures. Black; femora reddish piceous; tibiae, tarsi, antennae, and palpi ferruginous.

Head large (1.5 mm. across eyes), obliquely narrowed behind eyes, convex posteriorly; occiput a little swollen behind eyes (beside posterior supra-orbital seta); front depressed; eyes large, protuberant. Prothorax broader than long (1.5 × 2.1 mm.), widest before middle, strongly roundly narrowed to apex, narrowed to base in a light curve; apex very lightly emarginate, bordered; anterior angles widely obtuse, not near neck; base arcuate, lightly sinuate on each side, bordered; lateral border wide, bearing a few fine setules near anterior angles besides two usual marginal setae. Elytra oval (5 × 3.5 mm.), convex; apical curve wide, sinuate at extremity of ninth interstice; border wide, reflexed; striae strongly crenulate. Tarsi with fourth joint of anterior wide, deeply excised; of intermediate deeply excised, lobes short, outer more prominent than inner; of posterior small, emarginate (not bilobed), outer side a little more prominent than inner. Length, 7.5, breadth, 3—3.5 mm.

Hab.—Great Lake (Simson). Three specimens.

In size and shape resembling *A. simsoni* Sl., but distinct by colour black; head larger; elytra more strongly striate, the striae more coarsely crenulate, seventh interstice well defined and seriate-punctate. It may be allied to *Dyscolus australis* Erichs., but does not agree with the description of that species by colour; form of prothorax (also basal angles and lateral basal impressions); elytra evidently far more strongly striate, etc.; in all the characters just mentioned it differs even more from the description of *D. dilatatus* Erichs.

AMBLYTELUS SIMSONI, sp. nov.

Oval; prothorax cordate, rounded on sides; basal angles obtuse, two marginal setae on each side; elytra oval, wide, lightly punctate-striate (sixth and seventh striae faint or obsolete), third interstice with three punctures, fifth interstice with one or two fine punctures on disc, seventh interstice impunctate. Brown (head and prothorax piceous brown, elytra reddish brown); legs, antennae, palpi, and abdomen ferruginous (tibiae darker than femora); prosternum and mesosternum reddish piceous.

Head large (1.7 mm. across eyes), lightly angustate behind eyes; vertex convex; front depressed; eyes prominent. Prothorax broader than long (1.7 × 2.1 mm.); apex (1.5 mm.) a very little narrower than base; base arcuate, very lightly sinuate on each side; lateral border wide, cut obliquely behind basal angles; lateral basal impressions well developed, short, wide; median line lightly impressed. Elytra oval (5.4 × 3.5 mm.), convex; five inner striae well marked, fine, crenulate; interstices depressed. Met-episterna (without epimera) about as broad as long. Tarsi with fourth joint of anterior wide, deeply excised; of intermediate bilobed (outer lobe a little longer than inner); of posterior wide, emarginate, outer side produced into a short lobe. Length, 8, breadth, 3.5—3.8 mm.

Hab.—Tasmania (Simson, No. 3314). Three specimens. A fourth specimen is darker in colour, proportionately a little wider, and more decidedly striate, but seems conspecific. Ben Lomond, 4000 feet (Simson).

In the Simson collection this species was named *Dyscolus dilatatus* Erichson, but it does not at all suit the description of that species; attention may be drawn to the following differences from Erichson's description of D. *dilatatus*:—Colour not "*subaeneomicans*"; antennae and prosternum not testaceous; basal angles of prothorax not "*denticuli instar subprominulis*"; elytra not "*subtillissime obsoleteque striatis.*" Erichson makes no mention of punctures on the third and fifth interstices in the description of *D. dilatatus*, and in all his descriptions of other Tasmanian Carabs these punctures are carefully recorded, when present. It may be near *D. australis* Erichs., but I cannot think it agrees with that species in colour—"*metallico-nitidus*"; it has not the basal angles of prothorax "*prominulis subrectis*"; and the elytra are too decidedly striate to be described as "*subtiliter obsoleteque punctato-striatis.*"

AMBLYTELUS NIGER, sp. nov.

Apterous, oval; prothorax of about equal width at base and apex, rounded on sides, basal angles not marked, anterior marginal seta present, basal seta wanting; elytra oval, wide, feebly striate, striae obsolete towards sides, eighth entire. Black; tibiae reddish piceous; tarsi and antennae reddish.

Head convex (1.5 across eyes), depressed between eyes, lightly and obliquely narrowed behind eyes; frontal impressions feeble; eyes protuberant. Prothorax broader than long (1.5 × 2 mm.), widest before middle, subdepressed; apex lightly emargin-

ate, finely bordered; anterior angles obtuse, not near neck; lateral border narrow; lateral basal impressions wide, shallow. Elytra oval (4.4 × 3.5 mm.), convex; apical curve wide, a little sinuate at extremity of ninth interstice; sides a little narrowed to base; border rather wide, reflexed; interstices depressed, third with two or three fine punctures on disc. Met-episterna (without epimera) about as long as broad. Length, 7—8, breadth, 2.9—3.5 mm.

Hab.—Mount Wellington ("Summit," Lea). Ten specimens have been examined. Mr. Lea informed me it was found on trunks of trees.

A distinct species differing from all others described by the following characters in conjunction: colour black; prothorax rounded on sides, narrowly bordered; posterior marginal seta wanting; in no other species of *Amblytelus* known to me does this occur. Compared with *A. curtus* Fabr., the fourth joint of the tarsi is less strongly bilobed.

AMBLYTELUS (DYSTRICHOTHORAX) PLACIDUS Lea (1908).

It is a distinguishing character of this species to have the legs testaceous with the middle part of the femora black; the lobes of the fourth joint of the tarsi are equal. Length, 4.5—5.5 mm.

Hab.—Cradle Mountain, Waratah (Carter and Lea); King Is. (Lea). A large series of specimens was obtained by Messrs. Carter and Lea, some of which Mr. Lea recorded as found "on King William Pine."

AMBLYTELUS CURTUS Fabricius.

A specimen (♀) from Launceston, 9.5 mm. in length, with the sutural black stripe of the elytra reaching the base, I cannot differentiate from the typical form of the mainland. Six other specimens (♂) are in the Simson collection, which, though smaller (6 7—8.5 mm.), must be taken to be conspecific with the larger specimen, from which they only differ by their smaller size; it would seem that Tasmanian specimens of *A. curtus* are of smaller average size than those of the mainland.

Hab.—Launceston, Brighton (Simson, No. 1368); Exeter (Carter).

Var. VITTATA Motschulsky.—A numerous series of specimens (16, ♂, ♀) in the Simson collection seem to represent *A. vittatus* Motsch.; these specimens only differ from *A. curtus* Fabr., by having the eighth interstice black, as well as the sixth and seventh, leaving only a narrow testaceous margin—the ninth interstice. It is doubtful whether this slight colour variety is deserving of a varietal name. Length, 8.5—11 mm.

Hab.—Launceston, Brighton, St. Patrick's River, Turner's Marsh, Avoca, Interlaken (Simson No. 1368).

PTEROGMUS, gen. nov.

Head convex, laevigate; frontal impressions strongly impressed, short, obliquely divergent backwards; two supraorbital setae on each side; a longitudinal border above base of antennae; eyes convex, strongly inclosed at base, distant from buccal fissure beneath. Labrum truncate, 6-setose. Clypeus with a setigerous foveiform puncture on each side. Mandibles stout, hooked, a seta in outer scrobe. Maxillae short; inner lobe hooked, not densely spinulose on inner side; outer lobe with two joints, apical joint stout. Maxillary palpi rather long; penultimate joint short, obconic, very sparsely setulose; apical joint stout, fusiform, sparsely setulose. Mentum with a short triangular median tooth. Ligula small, corneous, bisetose.

Labial palpi short; penultimate joint bisetose: apical joint short, subfusiform, rather ampliate at basal third, obtuse at apex, sparsely setulose. Antennae slender, compressed, not long; two basal joints glabrous; third joint one-half longer than second, longer than fourth, sparsely setulose. Prothorax lightly transverse, rounded on sides, subsinuate just before base; basal angles rectangular; posterior marginal seta wanting; a few fine punctures on each side of base. Elytra convex, fully striate; third interstice 3-punctate beside third stria; eighth interstice subcarinate towards apex; base bordered; margin interrupted by an internal plica towards apex. Met-episterna short, quadrate (including epimera hardly longer than broad). Ventral segments without a transverse sulcus; apical segment bisetose on each side in both sexes (in ♀ also with two other anteapical setae). Anterior tarsi in ♂ with three basal joints lightly dilatate and biseriately squamulose beneath.

Though the third joint of the antennae is sparsely setulose, and the penultimate joint of the maxillary palpi has some minute setules, this genus cannot be placed in the tribe Merizodini on account of the anterior tarsi in ♂ having three joints dilatate and biseriately squamulose beneath, I believe its position is beside *Phersita*.

PTEROGMUS RUFIPES, sp. nov.

Oval, convex; head strongly bi-impressed; prothorax subquadrate, punctulate and without a submarginal carina near basal angles, posterior marginal seta wanting; elytra strongly striate, bordered on base, third interstice 3-punctate beside third stria. Black; margin of elytra, legs, and antennae reddish.

Head wide (1.2 mm.) across eyes; vertex laevigate; frontal impressions deep, strongly divergent, attaining margin at middle of eyes, connected in front by a strong transverse line; spaces between border and frontal sulci convex; anterior supra-orbital seta situated at posterior extremity of frontal sulci. Prothorax laevigate, broader than long (1.4 × 2 mm.), widest just before middle, a little wider across base (1.5 mm) than apex (1.3 mm.); sides rounded, shortly sinuate before base; border narrow, continued strongly along base on each side; basal angles a little prominent, summit obtuse, inner angle well marked; median line distinct; lateral basal impressions narrow, well marked. Elytra oval (3.6 × 2.6 mm.), convex; humeral angles obtuse but marked (basal border a little raised above lateral border at junction); interstices a little convex, more strongly so on apical declivity; eighth interstice wide, strongly raised above ninth and with a narrow edge near apex, ninth narrow, seriate-punctate. Length, 5.5—6.5, breadth, 2.5—2.6 mm

Hab.—Ben Lomond, 4000 feet (Simson No. 3124); Waratah (Carter and Lea). A good series of specimens was in the Simson Coll.

Resembles a species of *Abacetus*, or a rather convex species of *Simodontus* in general appearance. No marginal seta is present near the basal angles in any of the eight specimens before me.

Genus PHERSITA.

Believing that the validity of Castelnau's genus *Teraphis* cannot be maintained under the laws of nomenclature, owing to the previous use of *Therapis* (1816), and *Teraphus* (1864), I adhere to the change of name I proposed in 1903. I now prefer to consider *Drimostoma montanum* Cast., as the type of a section in the genus *Phersita* rather than to formulate a new genus for its recep-

tion: it does not belong to the genus *Drimostoma*. *Drimostoma helmsi* Sl., also represents a section of the genus *Phersita;* but if we examine many other genera we will find variations among the species as great as those between *Teraphis melbournensis* Cast., *Drimostoma montanum* Cast., and *D. helmsi* Sl.

Table of Australian and Tasmanian species.

1 (6) Antennae increasing in thickness to apex, joints 5—11 moniliform, compressed; elytra with humeral angles dentate; met-episterna (with epimera) longer than broad (epimera long).
2 (5) Prothorax with outer basal impression strongly impressed, third interstice of elytra bipunctate beside third stria.
3 (4) Prothorax with sides obliquely subsinuate to base, basal angles rectangular, not denticulate .. .. *melbournensis* Cast.
4 (3) Prothorax with sides arcuate posteriorly, very shortly sinuate just before base, basal angles denticulate .. .. *tasmanica* Sl.
5 (2) Prothorax with outer basal impressions obsolescent; elytra with third interstice impunctate .. .. *helmsi* Sl.
6 (1) Antennae setaceous, slender, joints 5—11 oblong; elytra with humeral angles marked but not dentate; met-episterna (with epimera) quadrate (epimera very short). (Form very convex, elytra with third interstice impunctate.)
7 (10) Prothorax with outer basal impression shallow and separated from inner impression.
8 (9) Form larger, less convex; elytra less ampliate on sides...Length, 7.5—8.5 mm. .. .. *montana* Cast.
9 (8) Form smaller, more convex; elytra more ampliate on sides. Length, 5.6—6.3 mm. .. .. *australis* Cast.
10 (7) Prothorax with outer basal impression deep, not separated from inner impression. Length, 6.7 mm. .. .. *convexa* Sl.

Note.—Teraphis melbournensis Cast. (= *T. argutoroides* Cast., from specimens in Howitt Coll.). *Drimostoma montanum* Cast. (= *D. alpestris* Cast.) I feel sure the synonymy given here is correct.

PHERSITA TASMANICA, sp. nov.

Oblong-oval; prothorax wide, wider at base (1.7 mm.) than apex (1.5 mm.); elytra ovate, strongly crenulate-striate, eighth interstice carinate towards apex, first interstice with a well marked short striole at base, third interstice bipunctate beside third stria, basal border acutely denticulate at shoulders. Ferruginous-brown.

Front strongly bi-impressed, impressions divergent backwards; eyes (with orbits) reniform; postocular part of orbits rather more than half the length of eyes, sloping obliquely to neck. Prothorax large (1.6 × 2.2 mm.), rather depressed; sides rounded, very shortly sinuate beside basal angles; anterior angles obtuse, bordered; base truncate, angles acute, subdentate; lateral margin rather wide, especially posteriorly; lateral basal impressions wide, sparsely punctulate. Elytra truncate-oval (4 × 2.6 mm.), lightly convex; interstices a little convex, seventh stria present as a row of closely placed punctures. Length, 7, breadth, 2.6 mm.

Hab.—Tasmania (Simson No. 3119). Several specimens.

Allied to *Ph. melbournensis* Cast., but eyes less globose and prominent, post ocular part of orbits longer, less abruptly raised from head; prothorax more

rounded on sides, more depressed posteriorly, sinuosity of sides much shorter, denticle at basal angles more sharply marked; elytra with humeral tooth more prominent.

PHERSITA AUSTRALIS Cast.

Hab.—Tasmania (Simson, No. 3690). Unique.

PHERSITA CONVEXA, sp. nov.

Oval, convex; prothorax broader than long, roundly ampliate at middle, sides sinuate before basal angles, base deeply concave, punctate; elytra very convex, strongly crenulate-striate; scutellar striole wanting, interstices convex, third impunctate, eighth strongly raised above seventh stria and subcarinate at apex, ninth narrow, seriate punctate. Black; legs, antennae, and palpi red.

Head convex (1.5 mm. across eyes); frontal impressions parallel, wide, shallow; eyes prominent, distant from buccal fissure beneath, lightly inclosed at base. Prothorax broader than long (1.8 × 2.3 mm.), convex, declivous to base; sides rounded, shortly (but evidently) sinuate to base; basal angles rectangular, subdentate; base truncate above peduncle, sloping slightly forward on each side; basal area depressed, punctate; two impressions on each side, outer impression shorter than inner, space between these impressions depressed; median line distinct. Elytra oval (4 × 3.2 mm.), declivous to base, strongly declivous to apex; base wide, emarginate, bordered; humeral angles marked, not dentate; sides rounded. Length, 6.7, breadth, 3.2 mm.

Hab.—Zeehan (Simson, No. 2123); Strahan and Waratah (Carter and Lea). Eleven specimens have been examined.

Very closely allied to *Ph. australis* Cast., from which it differs by larger size, more convex form; the concavity formed by the bases of prothorax and elytra deeper and (on prothorax) more punctate; prothorax more ampliate on sides, basal impressions deeper, margin more strongly raised above the outer impression.

Genus SIMODONTUS.

Note.—I have identified with confidence *S. orthomoides* Chaudoir, as synonymous with *S.* (*Argutor*) *holomelanus* Germ. (*Hab.*—Mount Lofty Ranges, S. Aust.). *S. elongatus* Chaudoir, I believe to be a species found about Sydney, and in the Blue Mountains (*cf.* Sloane, Proc. Linn. Soc. N.S.W., 1899, p. 573); I have not seen it from Tasmania.

Table of Tasmanian species.

1	(4)	Met-episterna elongate.	
2	(3)	Prothorax hardly narrowed to base; interstices of elytra depressed	*australis* Dej.
3	(2)	Prothorax evidently narrowed to base; elytra lightly striate	*transfuga* Chaud.
4	(1)	Met-episterna short	*aeneipennis* Chaud.

SIMODONTUS AUSTRALIS Dejean.

7.5 × 3.1 mm. This species was not in the Simson Coll., but specimens ticketed "Tas." were sent to me from the South Australian Museum.

Note.—Two specimens (♂) from Mr. Lea's collection ticketed "Hobart" are more elongate than *S. australis*, and have the elytra more strongly striate; more specimens would be needed to enable it to be properly studied.

Two specimens (♂) from Green Island are in the Simson Coll. numbered 2482; these have altogether the facies of *S. convexus* Chaud., but have the basal angles of the prothorax more marked. It seems conspecific with *S. convexus*, but I am not prepared to determine it.

SIMODONTUS TRANSFUGA Chaudoir.

I identify as *S. transfuga*, specimens in the Simson Coll. ("No. 3479"); it differs from *S. australis* Dej. by shape more elongate, more parallel; prothorax less transverse, more narrowed to base, more shortly narrowed to apex (in *S. australis* the prothorax is widest about middle, in *S. transfuga* a little before middle); elytra with humeral dentiele more prominent, more opaque in ♀. *S. murrayanus* Blackb., very closely resembles *S. transfuga*, but has the humeral dentiele of the elytra less developed.

Hab.—Brighton, Flinders Is. (No. 3479).

SIMODONTUS AENEIPENNIS Chaudoir.

Hab.—Brighton, Devonport (Simson); Stanley, King Is. (Lea). Also found in Victoria (Portland).

Genus PROSOPOGMUS.

My idea of the genus *Prosopogmus* includes Chaudoir's subgenera *Ceneus*, *Harmochilus*, and *Ophryosternus*.

Table of Tasmanian and Australian species.

1 (22) Elytra with eighth interstice free at apex, fifth and seventh inclosing sixth.
2 (19) Elytra with third interstice 3-punctate (anterior puncture beside third, two posterior punctures beside second stria).
3 (14) Legs red, femora sometimes piceous.
4 (9) Size large, 10.5—13.5 mm.
5 (8) Prothorax with basal angles well marked; elytra depressed on disc.
6 (7) Black. Length, 12—13.5 mm. .. .. *boisduvali* Cast.
7 (6) Head and prothorax bright green, elytra with eighth and ninth interstices green. Length, 10.5 mm. .. .. *harpaloides* Chaud.
8 (5) Prothorax with basal angles obtuse; elytra lightly convex on disc. Length, 11.5 mm. .. .. *leai* Sl.
9 (4) Size smaller, not exceeding 8.5 mm.
10 (13) Prothorax with basal angles rectangular; elytra with seventh and eighth interstices narrow, convex, subequal in width with ninth.
11 (12) Elytra with punctures of third interstice punctiform. Length, 7.5 mm. .. .. *austrinus* Sl.
12 (11) Elytra with punctures of third interstice foveiform. Length, 6.5 mm. *rubicornis* Sl.
13 (10) Prothorax with basal angles obtuse; elytra with eighth interstice much wider than ninth. Length, 7—8 mm. .. .. *tasmanicus* Sl.
14 (3) Legs testaceous.
15 (16) Elytra with interstices (including lateral ones) depressed. (Olivaceous, shagreened; prothorax not punctate near base; dorsal punctures of elytra interrupting the narrow third interstice.) Length, 7 mm. *yarrensis* Sl.
16 (15) Elytra with lateral interstices convex.
17 (18) Prothorax strongly punctate on each side of base. Piceous, elytra reddish near sides and on apical declivity. Length, 6.5 mm *punctiferus* Sl.

18 (17) Prothorax minutely punctate in lateral basal impressions. Piceous, elytra with sides (widely) and apex brownish yellow. Length, 7—8 mm. .. .. *foveipennis* Macl.

19 (2) Elytra with one or two punctures beside second interstice, (anterior puncture wanting).

20 (21) Prothorax hardly narrowed to base, sides not subsinuate posteriorly, basal impressions wide and shallow; elytra with only one puncture on third interstice (the posterior one). Length, 10.5 mm. *suspecta* Chaud.

21 (20) Prothorax decidedly narrowed to base, sides subsinuate posteriorly, two deep basal impressions on each side; elytra with two punctures on third interstice beside third stria. Length, 8.5—10 mm. *monochrous* Chaud.

22 (1) Elytra with seventh interstice inclosed at apex by sixth and eighth. (Met-episterna elongate.)

23 (26) Elytra with interstices nitid and strongly convex in both sexes.

24 (25) Prothorax with basal impressions impunctate. Length, 10—11.5 mm. *coracinus* Erichs.

25 (24) Prothorax with basal impressions punctate. Length, 7—8 mm. *occidentalis* Macl.

26 (23) Elytra with interstices opaque in ♀.

27 (28) Prothorax evidently narrowed to base; striole at base of second elytral interstice short. Colour atrous. Length, 9 mm. *namoyensis* Sl.

28 (27) Prothorax not evidently narrowed to base; striole at base of second interstice elongate. Colour of a somewhat bronzy or greenish tint.

29 (30) Antennae and tarsi ferruginous. Colour atrous, with slight metallic bronzed tint on elytra. Length, 7.5—9 mm. *oodiformis* Macl.

30 (29) Antennae and tarsi infuscate. Upper surface bluish green. Length, 7—8.5 mm. .. .. *delicatulus* Tschitsch.

Note.—*P.* (*Argutor*) *nitidipennis* Macl., is a species of *Prosopogmus*, but no specimen is available to me at present. *P.* (*Abax*) *reichei* Cast. is likely conspecific with *P. boisduvali* Cast. *P.* (*Harpalus*) *quadraticollis* Cast., I have not identified. *P. insperatus* Sloane is not now available for reference; the type is missing. All the species known to me as occurring in Tasmania are noted hereunder.

PROSOPOGMUS LEAI, sp. nov.

♀.—Elliptical, lightly convex; prothorax subquadrate, base (3.2 mm.) much wider than apex (2.5 mm.), basal angles obtuse; elytra strongly striate, interstices not convex except towards apex, third interstice 3-punctate, shoulders dentate; met-episterna (with epimera) longer than anterior breadth; prosternum bordered at point. Black nitid.

Head convex (2.2 mm.) across eyes; frontal impressions not deep, divergent backwards; eyes inclosed behind, reniform (with orbits). Prothorax transverse (2.75 × 3.5 mm.), widest before middle, strongly narrowed to apex, lightly obliquely narrowed to base, impunctate near base; anterior margin bordered, hardly emarginate; base lightly emarginate in middle, truncate on each side; lateral border narrow; median line lightly impressed; inner basal impression shallow, sulciform, outer impression obsolete; posterior marginal puncture foveiform, a little distance from base. Elytra oval (6.7 × 4 mm.); third interstice with anterior puncture beside third stria, two posterior punctures beside second stria; eighth interstice free at apex, fifth and seventh inclosing sixth, ninth seriate-

punctate, the punctures not interrupted in middle; striole at base of second interstice linear. Length, 11.5, breadth, 4 mm.

Hab.—Tasmania (Lea). Unique.

In size and general appearance more resembling *P. coracinus* Erichs. than any other species; but differing decidedly by frontal impressions weaker, eyes less convex, more strongly inclosed at base by orbits; prothorax with basal angles obtuse, outer basal impression obsolete; elytra with striae shallower, interstices much less convex, fifth and seventh inclosing sixth at apex, eighth free at apex, punctures of ninth not interrupted in middle.

PROSOPOGMUS TASMANICUS, sp. nov.

♂.—Parallel-elliptical; prothorax subquadrate, wider at base (2.1 mm.) than apex (1.7 mm.), bi-impressed on each side of base, basal angles obtuse, but marked; elytra striate, interstices depressed, third interstice 3-punctate, eighth free at apex; met-episterna (with epimera) longer than broad. Black; tibiae piceous red; tarsi and antennae red.

Head ordinary (1.6 across eyes), lightly bi-impressed. Prothorax broader than long (2 × 2.5 mm.); sides arcuate to apex, oblique to base; inner basal impression sulciform, outer foveiform; pore of posterior marginal seta distinct, between outer basal impression and basal angle. Elytra truncate-oval (4.5 × 3 mm.); humeral angle strongly marked, shortly dentate; interstices a little convex towards apex, third with anterior puncture beside third stria, two posterior punctures beside second stria, fifth and seventh inclosing sixth at apex; striole at base of second interstice short. Prosternum bordered at point, ventral segments smooth; ♂ with two, ♀ with four setigerous submarginal punctures at apex. Length, 7—7.7, breadth, 2.15—3 mm.

♀.—A little wider than ♂; prothorax with basal angles a little more obtuse; elytra slightly duller.

Hab.—Denison Gorge, Lottah, Zeehan, Mount Wellington (Simson, No. 3118); Devonport, Sheffield, Hobart (Lea).

The type is from Denison Gorge; two specimens (♀) in the Simson Coll. from Mount Wellington, have the prothorax with basal angles more obtuse than in the specimen (♀) from Lottah, and a specimen (♀) from Zeehan has the second, fourth, and sixth interstices of the elytra evidently wider than the third, fifth, and seventh; two specimens in Mr. Lea's collection from Devonport and Sheffield have the elytra more strongly striated than in the type. I believe all these specimens are referable to one species, but a good knowledge of numerous specimens from many localities in Tasmania is necessary before the question of its variations can be dealt with.

PROSOPOGMUS PUNCTIFERUS, sp. nov.

♂.—Elliptical-oval, subdepressed; prothorax subquadrate, wider at base (1.7 mm.) than apex (1.5 mm.), bi-impressed and punctate on each side of base, basal angles almost rectangular; elytra strongly striate, interstices convex on lateral and apical declivities, third 3-punctate, eighth free at apex; met-episterna (with epimera) longer than broad, without epimera hardly as long on inner side as at anterior margin. Head and prothorax shining bronzed-black; elytra piceous with faint bronzy tints on disc; lateral margin from seventh interstice and some obscure maculae on apical declivity brownish; undersurface black (including posterior coxae and base of posterior trochanters); antennae and palpi ferruginous; mandibles

piceous red; four anterior coxae, femora, and apex of posterior trochanters testaceous; tibiae, tarsi, and four anterior trochanters ferruginous; extreme apex of femora and tibiae infuscate.

Head ordinary (1.3 mm. across eyes), lightly bi-impressed. Prothorax transverse (1.5 × 2 mm.), widest before middle; sides lightly curved to apex, oblique to base; apex lightly emarginate; base lightly emarginate in middle; basal angles marked, almost rectangular, obtuse at summit; base depressed, bi-impressed and covered with a decided puncturation on each side; a posterior marginal seta present just within basal angle. Elytra truncate-oval (3.6 × 2.3 mm.), lightly convex; second and fourth interstices wider than third; seventh and eighth interstices equal, convex, narrower than ninth; striole at base of second interstice elongate; punctures of third interstice interrupting its course. Length, 6.5, breadth, 2.3 mm.

Hab.—Waratah (Lea). Unique.

A distinct species differing from all others, except *P. yarrensis* Sl., and *P. foveipennis* Macl., by its testaceous legs; from *P. yarrensis* it differs greatly by colour; prothorax strongly punctate; elytra with interstices more convex, especially the narrower eighth. The specimen before me has a foveiform depression on the fifth interstice, half-way between the two posterior punctures of the third interstice.

Prosopogmus monochrous Chaudoir.

(= *Hormochilus id.*, = *Eccoptogenius feronoides* Castelnau.)

Hab.—Launceston (Simson No. 2477); Hobart (Lea). Also found in the coastal districts of Victoria and N.S. Wales.

Prosopogmus coracinus Erichson.

(= *Pterostichus id.*, = *Ceneus chalybeipennis* Chaudoir, = *Feronia vilis.*) Castelnau).

Prosopogmus delicatulus Tschitscherine (1898). (*Feronia* (*Ophryosternus*) *ea.*)

Its most apparent differences from *P. oodiformis* Macl., a common species on the mainland, are its bluish-green colour, and infuscate tarsi and antennae.

Hab.—Launceston, East Tamar (Simson).

Genus Rhabdotus.

Rhabdotus reflexus Chaudoir.

Pterostichus diemenensis Cast., is synonymous with *R. reflexus* Chaud., and I would reduce *R. floridus* Bates to a variety. Chaudoir described *R. reflexus* as black, sides of prothorax subsinuate, basal angle rectangular; *R. floridus* Bates has similar angles, but is, as Bates says, "distinguished from *R. reflexus* by the rich, uniform, purple colour of the elytra." A specimen from Zeehan has head black, prothorax nigro-virescent, elytra purple; prothorax wider than usual at base, basal angles rather obtuse, sides curving very lightly to base. With the large series of specimens I have before me I cannot draw any definite line dividing *R. floridus* from *R. reflexus;* there seems every degree of variation of colour from the black specimens to the most highly coloured.

Hab.—*R. reflexus*, typical form: Mount Wellington, Ben Lomond, 4000 feet, Forester River (Simson). Var. *florida*: Zeehan, Strahan (Simson, Nos. 3040 3317, 3464); Cradle Mountain, Waratah, Magnet, Devonport (Lea).

Genus NOTONOMUS.

Table of Tasmanian species.

1 (4) Elytra deeply and fully striate, interstices convex, particularly at apex.

2 (3) Elytra with apical sinuosities obsolescent. Length, 15—20 mm. *politulus* Chaud.

3 (2) Elytra with apical sinuosities well marked, (third interstice inflated near apex, in ♀ protuberant; a triangular projection on lateral border on each side of apex in ♀). Length, 16.5—18 mm. *tubericaudus* Bates.

4 (1) Elytral striae (excepting eighth) faint or obsolete, interstices depressed.

5 (6) Elytra with lateral border narrow near base, basal border forming a blunt protuberance at humeral angles. Length, 13—16 mm. *chalybeus* Dej.

6 (5) Elytra with lateral border strongly reflexed near base, basal border uniting with lateral border at humeral angles without a marked prominence. Length, 16.5—18 mm. .. .. .. *philippi* Newm.

NOTONOMUS POLITULUS Chaudoir.

This species is widely distributed in Tasmania; specimens are in the Simson Coll. from Launceston, Denison Gorge, Ben Lomond (4000 feet), Forester River, Wynyard, Strahan, Zeehan, Mount Wellington (Nos. 3056, 3090), Flinders Is. (No. 2728). It occurs at Cradle Mountain, Waratah, Strahan (Carter and Lea). In the long series of specimens brought from Waratah by Mr. Lea in January, 1918, the number of punctures on the third interstice of the elytra varies from two to four; some specimens had the prothorax a little more narrowed to the base, and the elytra more rounded on the sides than usual, but all were evidently of one species.

NOTONOMUS TUBERICAUDUS Bates.

It is easy to distinguish the ♀ of this species from the ♀ of *N. politulus* Chaud., by the ante-apical protuberance of the third interstice of the elytra, and the triangular projection on the border near the apex; but to separate the ♂ is not so easy; the third interstice is a little swollen at apex, and the fourth interstice curves round the extremity of the third in a way it does not do in *N. politulus;* the lateral apical sinuosities also are more decided.

Hab.—Denison Gorge, Ben Lomond, 4000 feet (Simson, No. 3112).

NOTONOMUS CHALYBEUS Dejean.

Hab.—Stanley (Simson No. 3466); Strahan (Carter and Lea); King Is. (Lea).

NOTONOMUS PHILIPPI Newman.

Hab.—Flinders Is. (Simson 3478). Also common about Port Phillip.

Genus PSEUDOCENEUS.

PSEUDOCENEUS SOLICITUS Erichson.

(? = *Poecilus iridipennis* Cast., ? = *P. iridescens* Cast.)

Hab.—Launceston, Kelso, Evandale, Avoca, Great Lake (Simson No. 2896). Small specimens (length 8.5 mm.) from the Great Lake were numbered "3693," as distinct from *P. solicitus;* this form is more convex; prothorax shorter, more

rounded on sides; elytra more strongly striate, interstices convex; there are, however, in the Simson Coll. specimens which link this slightly differentiated race with the typical form of the species; one would need to be more confident of the value of these apparent differences than I am to give a distinctive name to No. 3693 of the Simson Coll.

Genus CHLAENIOIDUS.

CHLAENIOIDUS PROLIXUS Erichson.

Hab.—Flinders Is. (Simson No. 2487).

Genus RHYTISTERNUS.

Table of Tasmanian species.

1 (4) Prothorax sinuate, or subsinuate before basal angles, these marked.
2 (3) Elytra with all striae distinctly marked, interstices convex at apex (seventh stria faint or obsolete for two thirds of its length). Length, 10—12 mm. .. .. *miser* Chaud.
3 (2) Elytra with five inner striae well marked, sixth and seventh faint or obsolete, except near apex. Length, 15—17 mm. *liopleurus* Chaud.
4 (1) Prothorax with sides arcuate to base, basal angles not marked. (Four inner striae well marked, striae 5 7 faint or obsolete, except towards apex.) Length, 14—17 mm. .. .. *cyathoderus* Chaud.

All these species are common and widely spread on the Australian mainland; only *R. cyathoderus* (No. 2476) was in the Simson Coll. The others are included here on the authority of Mr. Lea's "List" of 1902.

Genus CATADROMUS.

CATADROMUS LACORDAIREI Castelnau.

Hab.—Macquarie River, Tasmania (Simson). Generally distributed in Australia.

Tribe **Anchomenini.**

Table of Tasmanian genera.

1 (4) Mentum dentate; prothorax with a marginal seta at basal angles; outer lobe of maxillae biarticulate.
2 (3) Elytra with third interstice punctate; tarsi glabrous above, ungues simple .. .. ANCHOMENUS.
3 (2) Elytra with third interstice impunctate; tarsi setose above, ungues serrulate .. .. LAEMOSTENUS.
4 (1) Mentum edentate; prothorax without a marginal seta at basal angles; outer lobe of maxillae uniarticulate .. .. HOMOTHES.

ANCHOMENUS MARGINELLUS Erichson

Hab.—Evandale, East Tamar, Great Lake (Simson, No. 2876); Strahan, Waratah (Carter and Lea).

LAEMOSTENUS COMPLANATUS Dejean.

Hab.—Launceston (Simson). Introduced.

Genus HOMOTHES.

I now consider this genus to belong to the tribe Anchomenini, which is the position assigned to it by Erichson. It is certainly not a Lebiid, the anterior coxal cavities having a single opening inwards; the tarsal vesture of the ♂ is as in the Anchomenini, not as in the Odacanthini.

Note.—I would delete from the genus, and from the Australian fauna, *Homothes emarginatus* Chaudoir, which I have recognised from the description as a species of Celebes and Borneo; it requires a new genus.

Table of Tasmanian species.

1 (4) Prothorax arcuate-angustate to base, and with an evident juxta-basal sinuosity.
2 (3) Elytra sericeous-black, inflexed margins piceous; antennae with seventh and eighth joints albescent .. .. *elegans* Newm.
3 (2) Elytra sericeous-brown, lighter-coloured near margin, inflexed margins testaceous; antennae brownish . (Punctures of third and ninth interstices set in testaceous spots.) .. .. *guttifer* Germ.
4 (1) Prothorax obliquely angustate to base without evident juxta-basal sinuosity. (Punctures of third interstice not testaceous.)
5 (6) Elytra with interstices flat, striae shallow; elytra sericeous-black; femora testaceous with apex infuscate .. .. .. *sericeus* Erichs.
6 (5) Elytra with interstices rather convex, striae deep; elytra black, opaque; femora piceous .. .. *niger* Sl

HOMOTHES ELEGANS Newman.

(? = *H. micans* Germ.).)

Hab.—Brighton, Roseberry, Strahan (Simson, No. 2613); Waratah, Bruni Is. (Lea). Common in S.E. Australia.

HOMOTHES GUTTIFER Germar.

Hab.—Launceston, Brighton (Simson, No. 2964). Very widely distributed on the mainland.

HOMOTHES SERICEUS Erichson.

(= *H. parvicollis* Blackburn, = *H. vicinus* Sloane). I feel confident about this synonymy.

Hab.—Strahan (Simson). Ranges from Sydney to Perth on the mainland.

HOMOTHES NIGER, sp. nov.

Black, opaque; tibiae lurid.

Depressed. Head convex (1.5 mm. across eyes), lightly obliquely narrowed behind eyes. Prothorax shagreened, wider than head, cordate (1.4 × 1.7 mm.), widest and angulate at marginal seta, obliquely narrowed to base; sides not sinuate before base. Elytra oval (5 × 3.3 mm.), subsinuate-truncate at apex, deeply crenulate-striate; interstices opaque, shagreened, subconvex, a little transversely wrinkled, especially towards sides; third interstice 5-punctate. Length, 8.2, breadth, 3.3 mm.

Hab.—Cradle Mountain (Carter). Unique.

A very distinct species differentiated from all others by colour coal-black; femora black; elytra more strongly striate, etc. Its prothorax resembles that of *H. sericeus* Erichs., but is wider, and the sides are obliquely angustate to the base with a faint outward curve, not an inward curve as in *H. sericeus*.

Tribe **Ctenodactylini.**

This tribe has not hitherto been recognised as entering the Australian fauna, but *Plagiotelum opalescens* Olliff, is certainly a member of it, as is also *Plagiotelum irinum* Solier; these two species are, from comparison, truly congeneric

PLAGIOTELUM OPALESCENS Olliff.

Prothorax with a fine marginal seta just before middle, no seta near basal angles; elytra with two shallow discal impressions along course of third interstice (anterior impression considerably before, posterior just behind middle); anterior coxal cavity with a single opening inwards; mesosternum unusually narrow between middle coxae; apex of abdomen in ♂ 6-setose, in ♀ plurisetose: tarsi more or less setulose beneath in both sexes, particularly the bilobed fourth joint: ♂, anterior tarsi clothed beneath with long, not dense, griseous hairs, this setosity on second and third joints most developed towards sides, in middle of these joints two narrow rows of pulvilli; ungues pectinate.

Hab.—Waratah (Carter and Lea). Not uncommon on flowers of *Leptospermum*.

CARABIDAE BIPERFORATAE.

Tribe **Licinini**.

Table of Tasmanian genera.

1 (4) Mentum joining gula without support at base. Penultimate joint of labial palpi bisetose.
2 (3) Antennae with two basal joints glabrous .. .. LESTIGNATHUS.
3 (2) Antennae with three basal joints glabrous .. .. LACORDAIRIA.
4 (1) Mentum supported at base by a submentum. Penultimate joint of labial palpi plurisetose .. .. DICROCHILE

Genus LESTIGNATHUS.

Table of species.

1 (4) Elytra with two fine punctures on third interstice.
2 (3) Size major; elytra with apical curve even. Length, 13.5—15.5 mm. *cursor* Erichs.
3 (2) Size minor; elytra with apical curve strongly sinuate on each side. Length, 9.5 mm. .. .. *simsoni* Bates.
4 (1) Elytra with three or four foveiform punctures on third interstice. Length, 7.5 mm. .. .. *foveatus* Sl.

LESTIGNATHUS CURSOR Erichson.

This species is widely spread, and varies a good deal in size and appearance, some specimens being proportionately broader than others; the length varies from 13.5 to 15.5, and the breadth from 5 to 6.2 mm.; the prothorax varies from 3 × 3.1 to 3.3 × 3.5 mm. (in these measurements the length of the prothorax has been measured between anterior and basal angles, *i.e.*, at place of greatest length). The greater breadth of the prothorax and elytra in some specimens as compared with others is evidently not altogether a sexual difference, though generally narrow specimens are females. The specimens from the West Coast seem usually smaller than those from Denison Gorge and Ben Lomond.

Hab.—Denison Gorge, Ben Lomond, Zeehan, Strahan (Simson, No. 3114); Waratah, Mount Magnet (Lea).

LESTIGNATHUS SIMSONI Bates.

(Simson No. 3115.)

LESTIGNATHUS FOVEATUS, sp. nov.

Oval; prothorax bisetose on each side, posterior seta on edge of border a little before basal angle; elytra lightly striate, interstices flat, third with three or four foveae; antennae with two basal joints glabrous, third setulose; met-

episterna short, transverse. Piceous black; lateral channel and inflexed margin of elytra testaceous; legs piceous; four anterior coxae, posterior trochanters, apex and base of femora, and tarsi lurid-testaceous; antennae infuscate.

Head small (1.2 mm. across eyes); labrum emarginate, with four submarginal setae. Prothorax broader than long (1.6 × 2 mm.), widest at anterior third, depressed, flat on each side of base; lateral basal impressions narrow, distant from lateral margin; sides rounded, strongly roundly narrowed to apex, narrowed in a gentle curve to base; apex feebly emarginate in middle; angles rounded off; border narrow, hardly more strongly reflexed at basal angles than on middle of sides, entire along anterior margin, obsolete only on middle of base. Elytra ovate (4.6 × 3.1 mm.); apical curve short, oblique, not perceptibly bisinuate; inner striae more or less interrupted near base; disc with a row of four equally spaced foveiform punctures on third interstice. Penultimate joint of maxillary palpi proportionately shorter, and terminal joints of both maxillary and labial palpi stouter than in *L. cursor* Erichs. Length, 7.5, breadth, 3.1 mm.

Hab.—Zeehan (Simson, type), Waratah, Strahan (Carter and Lea).

A distinct species, which differs decidedly from the other two species of the genus by the four large discal punctures of the third interstice of the elytra. As in *L. simsoni* Bates, the posterior marginal seta of the prothorax rises from a pore on the edge of the border a little before the basal angle; in *L. cursor* the post-marginal seta and its pore are obsolete. The prothorax is flatter and shorter than in *L. cursor*, therefore more resembling that of *L. simsoni*.

Genus LACORDAIRIA.

LACORDAIRIA CALATHOIDES Castelnau.

Oval, depressed. Head small (1 mm. across eyes); antennae with three basal joints glabrous; labrum deeply triangularly excised, 4-setose; clypeus emarginate. Prothorax depressed, transverse (1.5 × 2.2 mm.), evidently wider across base than apex; derm finely shagreened; sides lightly rounded; apex lightly emarginate; angles obtuse; base truncate, curving lightly forward on each side, angles obtuse; basal area flat on each side; lateral basal impressions short, distinct; border entire, narrow on sides, bearing at basal angle a setigerous pore. Elytra ovate (4.2 × 2.9 mm.), depressed on disc, lightly declivous to basal border on each side of base, rather strongly declivous to apex, finely striate; interstices flat, third impunctate, eighth very wide; apical curve short, even. Black, nitid; antennae, tibiae, and tarsi ferruginous. Length, 7, breadth, 2.9.

Hab.—St. Marys (Simson, No. 3643). Unique.

I feel confident in identifying this species as *L. calathoides* Cast., and offer the above description to record some characters of importance not noticed by Castelnau. It differs from the Victorian species *L. argutoroides* Cast. (which also has the third interstice of the elytra impunctate) by femora piceous; form wider; prothorax broader with sides more evenly rounded; elytra much wider, more finely striate, eighth interstice wider, etc.

Genus DICROCHILE.

Table of Tasmanian species.

1 (2) Prothorax with a deep concavity on each side, base bordered externally by the strongly upturned margin, basal angles marked; third interstice of elytra 3-punctate. Length, 15.5 mm. .. *quadricollis* Cast.

2 (1) Prothorax flat on each side of base, the depressed area bordered externally by the lateral border, basal angles rounded; third interstice of elytra 2-punctate.
3 (6) Prothorax very broad; elytra with interstices convex, nitid in both sexes.
4 (5) Elytra with striae crenulate. Length, 14—15 mm. *goryi* Guer.
5 (4) Elytra with striae simple. Length, 12 mm. . . . *brevicollis* Chaud.
6 (3) Prothorax lightly transverse; elytra with interstices depressed, opaque in ♀. Length, 12 mm. . . . . *minuta* Cast.

Note.—Bates reported *D. punctipennis* Cast., as a Tasmanian species received from Mr. Simson; perhaps this may be the same species which I have identified as *D. quadricollis* Cast.

DICROCHILE QUADRICOLLIS Cast.

♂. Black. Head large. Prothorax subquadrate (2.5 × 3.6 mm.), widest before middle; base and apex of equal width (3 mm.); sides subsinuate posteriorly; basal angles marked; a concavity on each side of base extending to the strongly upturned margins. Elytra wide, strongly striate; striae simple; interstices hardly convex, third 3-punctate. Ventral segments 3—5 setigero-punctate. Length, 15, breadth, 6 mm.

Hab.—Flinders Is. (Simson, No. 2375). Also found in Victoria.

I unhesitatingly identify this species as *D. quadricollis* Cast.; it is conspecific with specimens in my collection from Mooroolbark (eastward of Melbourne). In the ♀, the ventral segments are without setigerous punctures.

DICROCHILE GORYI Guerin.

Hab.—Falmouth (Simson). Very widely spread in Australia.

DICROCHILE BREVICOLLIS Chaudoir.

Hab.—Great Lake (Simson). Widely spread in Australia.

DICROCHILE MINUTA Castelnau.

Hab.—Hobart (Lea); Epping (Griffith). In a note, Mr. Lea says, "Found by Mr. Griffith flying plentifully in Epping Forest at dusk." Common and widely spread on the mainland. It may be noted that in all the specimens I have examined, only two punctures have been present on the third interstice of the elytra, though Castelnau gives the number as three.

Tribe **Oodini.**

Genus OODES.

OODES MODESTUS Castelnau.

Hab.—Evandale (Simson, No. 3502).

Genus COPTOCARPUS.

COPTOCARPUS AUSTRALIS Dejean.

Hab.—Launceston, East Tamar, Evandale (Simson).

Tribe **Tetragonoderini.**

Genus SAROTHROCREPIS.

Lebiomorpha (*gen. ined.*) Chaudoir. *Ectroma* (*nom praeoc.*) Blackburn.

I have found the characters on which Blackburn sought to establish his genus

Ectroma elusive; and, though the species on which Blackburn founded this genus (genotype, *Lebia civica* Newm.), might be put in Chaudoir's suggested genus *Lebiomorpha* (genotype, *L. civica* Newm.), as has been done by me in the past, it now seems better to follow Macleay and refer them to *Sarothrocrepis, sensu lato.*

Table of Tasmanian species.

1 (10) Fourth joint of all tarsi bilobed.
2 (7) Size large. Length, 7.5 mm., or over.
3 (6) Prothorax testaceous.
4 (5) Elytra with interstices 6—8 infuscate to base, base also infuscate. Length, 9—10 mm. .. .. *calida* Newm.
5 (4) Elytra testaceous on basal third, and with a large, ante-apical, black area. Length, 7.5—8 mm. .. .. *posticalis* Guer.
6 (3) Prothorax and elytra piceous (or black) with wide, testaceous, lateral margins. Length, 7—8 mm. .. .. *luctuosa* Newm
7 (2) Size small, less than 6 mm. in length.
8 (9) Head testaceous, elytra black with post-basal plagae, lateral margins, and apex testaceous .. .. *benefica* Newm.
9 (8) Head and prothorax black, elytra black with testaceous post-basal plagae .. .. *civica* Newm.
10 (1) Tarsi with fourth joint bilobed on four anterior tarsi, simple on posterior tarsi.
11 (12) Elytra testaceous, four basal black spots and a wide, post-median, black area extending across elytra—only lateral border and inflexed margins excepted .. .. *gravis* Blackb.
12 (11) Elytra testaceous, two basal black spots on fourth and fifth interstices, and a narrow irregular black fascia above apical declivity (its anterior margin deeply emarginate). (Sometimes the fascia continuous across six inner interstices, sometimes it is obsolete on fifth interstice and its usual apex appears as a small black spot just before the middle of the length of the sixth interstice—typical form.) *inquinata* Erichs.

SAROTHROCREPIS CALIDA Newman.

(= *S. infuscata* Sloane, Proc. Linn. Soc. N.S. Wales, 1916, p. 206.)

Mr. H. E. Andrewes, to whom I sent specimens, has compared *S. infuscata* with the type of *Lebia calida*, in the British Museum, and has informed me that it is the same species. I believe it is distinct from *S. corticalis* Fabr.

Hab.—Launceston, Brighton, St. Patrick's River, Mole Creek (Simson, No. 2486); Burnie, Sheffield (Carter and Lea). Also found in the mountains of S.E. Australia.

SAROTHROCREPIS POSTICALIS Guerin.

[= *S. suavis* Sloane (*non* Blackburn), Proc. Linn. Soc. N.S. Wales, 1917, p. 423.]

I formerly took this species for *S. suavis* Blackb., from which it differs by the sharply marked basal angles of the prothorax. Testaceous, with a large black patch on the apical half of the elytra. Length, 7.5—8 mm.

Hab.—Launceston, Brighton, Beaconsfield, West Tamar (Simson No. 2675). Also found in the mountains of S.E. Australia.

SAROTHROCREPIS LUCTUOSA Newman.

Hab.—Brighton (Simson, No. 2676). Widely spread in the mountains of South-eastern Australia.

SAROTHROCREPIS BENEFICA Newman.

Hab.—Launceston, St. Patrick's River, Epping (Simson, No. 2490). Widely spread in Australia.

SAROTHROCREPIS CIVICA Newman.

Hab.—Launceston, West Tamar, Karoola (Simson, No. 3311). Widely spread in Australia.

SAROTHROCREPIS GRAVIS Blackburn.

Hab.—Denison Gorge (Simson). Mountains of Victoria and N.S. Wales.

SAROTHROCREPIS INQUINATA Eriehson.

Hab.—Kelso "beach" (Simson).

Tribe **Lebiini.**

Table of Tasmanian genera.

1 (4) Tarsi with fourth joint bilobed.
2 (3) Labial palpi with apical joint stout, but not triangularly securiform ..... XANTHOPHAEA.
3 (2) Labial palpi with apical joint securiform. (Tarsi glabrous.) ..... TRIGONOTHOPS.
4 (1) Tarsi with fourth joint simple.
5 (10) Mesosternum narrow between intermediate coxae.
6 (9) Tarsi setulose on upper surface. Interstices of elytra setulose-punctate, third bearing at least three setiferous punctures.
7 (8) Palpi with penultimate joint long; intermediate tarsi in ♂ with two or three joints squamose beneath .. .. PHILOPHLOEUS.
8 (7) Palpi with penultimate joint short; intermediate tarsi in ♂ without squamae beneath .. .. AGONOCHILA.
9 (6) Tarsi glabrous on upper surface. Interstices of elytra laevigate, third bipunctate (anterior puncture on basal third beside third stria, posterior puncture about apical third beside second stria) ..... DIABATICUS.
10 (5) Mesosternum wide between intermediate coxae.
11 (12) Eyes not enclosed at base in swollen orbits .. .. .. MICROLESTES?
12 (11) Eyes enclosed at base in swollen orbits .. .. ANOMOTARUS.

Genus XANTHOPHAEA.

Table of Tasmanian species.

1 (4) Tarsi with upper surface setose; antennae with basal joints setulose.
2 (3) Form narrow, elongate (elytra, 5 × 3 mm.); elytra testaceous with a piceous vitta along sixth and seventh interstices. *infuscata* Chaud.
3 (2) Form oval (elytra, 4 × 3.2 mm.); upper surface piceous .. ..*setosa* Sl.
4 (1) Tarsi with upper surface glabrous; antennae with three basal joints glabrous. Testaceous .. .. *brachinoderus* Chaud.

XANTHOPHAEA INFUSCATA Chaudoir.

Hab.—Launceston, Brighton, Beaconsfield, George Town (Simson, No. 2488).

XANTHOPHAEA SETOSA, sp. nov.

Oval; head obliquely and strongly narrowed behind eyes, antennae with three basal joints sparsely setulose; prothorax transverse, lateral margins explanate, reflexed, basal angles acute, surface sparsely setose, several long setae on anterior

part of sides; elytra wide, ovate, interstices sparsely setigero-punctate; tarsi setose on upper surface, fourth joint deeply emarginate, ungues pectinate. Piceous; antennae and palpi ferruginous; legs ferruginous-yellow.

Head wide across eyes (1.5 mm.); vertex convex, setose; front wide, subdepressed; labrum rounded at angles, apex emarginate in middle, 6-setose, the setae submarginal; palpi stout, labial with apical joint stout, obliquely truncate from inner side, strongly rounded on external side; mentum with a strong median tooth. Prothorax broader than long (1.3 × 1.8 mm.), widest at anterior third, wider at base (1.4 mm.) than apex (1.2 mm.); apex lightly emarginate; anterior angles rounded; sides rounded on anterior two-thirds, subsinuate posteriorly and meeting base at right angles; basal angles acute, denticulate; base truncate on each side behind margins, a little produced backwards and truncate in middle; median line strongly impressed, the setae of the surface rising from punctures. Elytra ovate (4 × 3.2 mm.), lightly convex, widest a little behind middle, more narrowed to base than to apex, rounded on sides; apex emarginate at suture; outer angles widely rounded; setae of interstices sparsely and rather irregularly placed, rising from conspicuous punctures; striole at base of first interstice short. Abdomen setigero-punctate, in ♂ with one, in ♀ with two setae on each side of apex. Length, 7—8, breadth, 3.2—3.4 mm.

Hab.—Mount Wellington (Lea). Five specimens have been examined.

Thoroughly distinguished from all other species except *X. pilosula* Chaud., by its setose upper surface. *X. pilosula* is unknown to me in nature, but *X. setosa* differs greatly from the description of that species which is described as having the elytra narrower and more elongate than *X. rittata* Dej.; in *X. setosa* the elytra are much wider and more oval than in *X. rittata*.

XANTHOPHAEA BRACHINODERUS Chaud.

Hab.—Launceston (Littler). Also from Western Australia, South Australia, Victoria, and New South Wales.

Genus TRIGONOTHOPS.

TRIGONOTHOPS PACIFICA Erichson.

I have seen only this one species from Tasmania; it is a species which varies considerably in size and appearance; always in *T. pacifica* the base of the elytra is black.

Hab.—Launceston, Brighton, St. Patrick's River, Mole Creek (Simson, No. 2489).

Genus PHILOPHLOEUS.

Idius Chaudoir.

Table of Tasmanian species.

1 (6) Prothorax with more than one marginal seta anteriorly. Apex of abdomen plurisetose.

2 (3) Prothorax narrow, usually with three setae on each side (very rarely with two or four setae). Intermediate tarsi in ♂ with three joints squamose beneath . . . . . *distinguendus* Chaud.

3 (2) Prothorax wide. Intermediate tarsi in ♂ with two joints squamose beneath.

4 (5) Size major (12 mm.). Prothorax lightly emarginate, three to five setae anteriorly on each side . . . . . *eucalypti* Germ.

5 (4) Size minor (8.5—9 mm.). Prothorax deeply emarginate, two strong setae on each side distant from apex, several fine setules at apical angles. (Apex of abdomen in ♂ 4-setose on each side.)
myrmecophilus Lea

6 (1) Prothorax with one marginal seta anteriorly.

7 (8) Black. (Apex of abdomen plurisetose.) .. .. .. *moestus* Chaud.

8 (7) Piceous; head, prothorax (sometimes disc infuscate), margins of elytra, a discoidal plaga on each elytron, antennae, and legs testaceous.

9 (12) Prothorax deeply emarginate.

10 (11) Prothorax with basal angles rounded off; elytra 3-maculate. Apex of abdomen in both sexes 4-setose on each side .. .. .. *simsoni* Sl.

11 (10) Prothorax with basal angles marked, though obtuse; elytra bivittate, vittae uniting at apex, narrow or interrupted at apical third. Apex of abdomen in ♀ 2-setose on each side .. .. .. *obtusus* Chaud.?

12 (9) Prothorax lightly emarginate. (Elytra with two narrow pointed discoidal vittae. Apex of abdomen in ♀ 2-setose on each side.)
bivittatus Sl.

Note.—I take the present opportunity of recording that on examining the type specimen of *P. ornatus* Blackb., it was evident that *P. truncatus* Sl. was the same species.

PHILOPHLOEUS DISTINGUENDUS Chaudoir.

This species is distinguished by having the elytral vittae usually short and pointed, rarely extending to the second puncture of third interstiee; the typical form has generally three anterior marginal setae on the prothorax, rarely four, and in one Tasmanian specimen only two setae on each side.

Hab.—Turner's Marsh, St. Patrick's Plains, Mole Creek (Simson).

PHILOPHLOEUS EUCALYPTI Germar.

It can hardly be distinguished from *P. australis* Dej., except by the intermediate tarsi of ♂ having two, not three joints squamose beneath; this character I have found constant in *P. eucalypti* and *P. distinguendus* Chaud. I do not see any reasons for distinguishing the Tasmanian form by the varietal name "*tasmanica*," as suggested by Blackburn.

Hab.—Launceston, Brighton (Simson, No. 2485).

PHILOPHLOEUS MYRMECOPHILUS Lea.

Hab.—Mole Creek, Karoola (Simson).

PHILOPHLOEUS MOESTUS Chaudoir.

(= *Idius id.* Chaud.)

Hab.—Great Lake (Simson).

PHILOPHLOEUS SIMSONI, sp. nov.

Oval, depressed; head depressed; prothorax deeply emarginate, posterior angles rounded off, two marginal setae on each side; elytra biplagiate on basal half; apical ventral segment in ♂ 3- or 4-setose, in ♀ 4- or 5-setose on each side; intermediate tarsi in ♂ with two basal joints squamose beneath. Head, disc of prothorax, tibiae, tarsi, palpi, antennae, and undersurface more or less ferruginous; femora and margins of prothorax testaceous; elytra piceous, a large

elongate plaga extending from base to about half the length on interstices 3—5 of each elytron, a rather large common apical mark on interstices 1—4 (emarginate on anterior margin), and a narrow lateral margin testaceous.

Head wide (1.8 mm. across eyes), strongly obliquely narrowed behind eyes, finely shagreened and punctulate; eyes very prominent. Prothorax transverse (1.5 × 2.7 mm.); surface covered with fine setulose punctures; lateral margins wide, depressed; sides strongly rounded; base shortly lobate. Elytra quadrate-oval (4.6 × 3.8 mm.); striae obsolescent; base arcuate on each side, emarginate in middle. Length 8.5, breadth, 3.8 mm.

Hab.—Launceston, Kelso, Mole Creek (Simson, No. 2847).

I know of no described species attributed to *Philophloeus* which has the pattern of the elytra similar to that of *P. simsoni*. It is allied to *P. sydneyensis* Blackb., with which it agrees in apical emargination of the prothorax, and the two marginal setae; apex of abdomen 4-setose on each side in ♂; intermediate tarsi with two joints squamose beneath; but the pattern of the elytra is different; in *P. sydneyensis* the pale vittae reach the apex, where they unite. Compared with *P. myrmecophilus* Lea, the protborax has the anterior angles less rotundate, not plurisetulose, the sides not with two or three setae anteriorly; elytra with shorter plagae, and apex testaceous in middle.

Philophloeus obtusus Chaudoir?

Two specimens (♀, No. 2674) are in the Simson collection without exact locality, which I identify as *P. obtusus* Chaud. Prothorax with two setae on each side; apex of abdomen in ♀ bisetose on each side; it resembles *P. simsoni* in pattern, but the testaceous plagae are more elongate, in one specimen attaining the apical macula, the prothorax is differently shaped, being less oblique and arcuate on each side of base, basal angles marked, but obtuse at summit and preceded by a light sinuosity. Length, 7—8, breadth, 3.5—3.7 mm.

Philophloeus bivittatus, sp. nov.

Oval, depressed; prothorax transverse, two lateral marginal setae on each side, basal angles obtuse; elytra bivittate, the vittae long, pointed, apex and ninth interstice piceous; apex of abdomen (♂) 2-setose on each side. Piceous; margins of prothorax (widely), vittae, lateral channel, border and inflexed margins of elytra, femora, middle of prosternum, and metasternum testaceous; head, antennae; mouth-parts, tibiae, and tarsi ferruginous; abdomen infuscate.

Head wide (1.65 mm. across eyes), shagreened, sparsely punctulate. Prothorax transverse (1.3 × 2.5 mm.); apex lightly emarginate; sides rounded, widely and obtusely subangulate at anterior marginal seta, oblique to base; basal angles obtuse; basal lobe short; base obliquely truncate on each side. Elytra oval-quadrate (4.3 × 3.4 mm.), finely and closely setulose-punctate, faintly striate; inner apical angles obtuse; base not roundly prominent on each side. Length, 7.5, breadth, 3.4 mm.

Hab.—Launceston (Simson). Two specimens.

Nearly allied to *P. confertus* Blackburn. From the Western Australian species which I identify as *P. confertus* it differs by ♂ with tarsal vesture on under side of three basal joints of intermediate tarsi; colour darker, especially prothorax not wholly testaceous; prothorax less transverse, less roundly narrowed anteriorly, anterior angles a little indicated, not so roundly obtuse. *P. confertus* has the apex of abdomen in both sexes bisetose on each side.

Genus AGONOCHILA.

Table of Tasmanian species.

1 (10) Prothorax transverse, strongly ampliate behind anterior angles. (Head short, eyes hemispherical.)
2 (5) Elytra with discal spots transverse, greatly reduced in length beyond fifth interstice.
3 (4) Prothorax with sides oblique to base, basal angles obtuse. Length, 5.5—6.5 mm. .. .. *curtula* Erichs.
4 (3) Prothorax with sides sinuate to base, basal angles rectangular. Length, 5 mm. .. .. *bimaculata* Sl.
5 (2) Elytra with discal spots variable, but not greatly reduced in length beyond fifth interstice.
6 (9) Prothorax ampliate and strongly rounded at widest part, evidently narrowed to base; sides subsinuate before base.
7 (8) Size major (7—7.5 mm.). Prothorax with one or two marginal setae before middle .. .. *plagiata* Sl.
8 (7) Size minor (4.5—5 mm.). Prothorax with one seta before middle *sinuosa* Chaud.
9 (6) Prothorax lightly rounded at widest part, obliquely narrowed to base. (Base wide; basal angles obtuse.) Length, 5—6 mm. *binotata* White.
10 (1) Prothorax lightly ampliate behind anterior angles. (Form rather elongate; elytra with narrow discal spots.)
11 (12) Size minor (4.5—5 mm.). Head short, eyes hemispherical *fenestrata* Blackb.
12 (11) Size major (5.5—6 mm.). Head longer, eyes prominent, but less than hemispherical.
13 (14) Prothorax with basal angles obtuse; anterior marginal seta at anterior third. Length, 5.5—6 mm. .. .. *biguttata* Chaud.
14 (13) Prothorax with basal angles sharply marked, anterior marginal seta behind anterior third. Length, 5.5 mm. .. .. .. *flindersi* Sl.

AGONOCHILA CURTULA Erichson.

(= *A. corticalis* Chaudoir.)

Hab.— Launceston, Kelso, Beaconsfield, Avoca, Turner's Marsh, Epping, Interlaken (Simson, No. 2487); Wilmot, Waratah (Carter and Lea). Common in S.E. Australia.

AGONOCHILA BIMACULATA, sp. nov.

Depressed; prothorax transverse, lightly emarginate at apex, sides strongly ampliate at widest part, sinuate posteriorly, basal angles rectangular, lateral margins explanate, wide anteriorly; elytra widest behind middle, decidedly narrowed to base, puncturation rather coarse. Piceous; elytra 3-maculate, maculae testaceous, discal pair irregularly oval, extending across interstices 3—6, apical spot common to both elytra, wide, extending forward on third and fourth interstices.

Head punctulate, depressed (1.25 mm. across eyes); eyes hemispherical. Prothorax widely transverse (1 × 1.65 mm.); sides strongly rounded, subangulate beside anterior marginal seta; sides strongly sinuate posteriorly, meeting base at right angles; apex lightly and widely emarginate; base shortly lobate, cut sharply on each side; basal angles sharp, almost rectangular; disc a little convex,

covered with small setulose punctures; margins wide, rugulose-punctate. Length, 5, breadth, 2.3 mm.

Hab.—Launceston (Simson).

Only the specimen on which the description is founded suits it in regard to the sharply rectangular basal angles of the prothorax; a second specimen (gummed on the same card with the type) has the prothorax similar, except that the ante-basal sinuosity of the sides is less developed, and the summit of the angles is a little obtuse; a third specimen (♂) resembling the second was numbered 3688; the pattern of the elytra in these three specimens is the same.

AGONOCHILA PLAGIATA Sloane.

Hab.—Sheffield. (Carter). I originally found this species on the trunks of *Eucalyptus coriacea* in N.S. Wales

AGONOCHILA SINUOSA Chaudoir.

Depressed; prothorax transverse, lightly emarginate at apex, base and apex of about equal width (1.1 mm.), basal angles obtuse, lateral margins explanate posteriorly, narrow anteriorly; elytra widest behind middle, a little narrowed to base, puncturation fine. Head rather dark red; prothorax ferruginous, sometimes slightly infuscate on disc; elytra piceous with testaceous markings, sometimes bimaculate on anterior half, and with an apical mark common to both elytra (trimaculate form), sometimes the two discal marks reach the apical one along the fourth, or fourth and fifth interstices (bivittate form); tibiae and antennae ferruginous, femora and basal joint of antennae testaceous. Length, 4.5—5 mm. The measurements of a specimen are:—Length, 5, proth., 1 × 1.5, el., 2.8 × 2.2 mm.

Hab.—Launceston (Carter); Hobart (Lea).

I have identified *A. sinuosa* Chaud., from the description of that author, which is insufficient. In pattern of elytra it is variable, so much so that it seems to me very probable that *A. vittula* Chaud., will prove to be the same. It was numbered 3315 in the Simson Coll., and under that number there was also a second specimen having the elytral pattern of the trimaculate form, but with the three spots much larger, prothorax with margins wide anteriorly; I believe this represents an undescribed species, but it could not be satisfactorily dealt with on a single specimen.

AGONOCHILA BINOTATA White.

After comparison of Tasmanian specimens with one from New Zealand, I consider the species the same; it has not yet been found on the mainland of Australia.

Hab.—Mole Creek (Simson, No. 2610).

AGONOCHILA FENESTRATA Blackburn.

Hab.—Tasmania (Simson, No. 2898). Widely spread on the mainland.

AGONOCHILA BIGUTTATA Chaudoir.

Hab.—Launceston (Simson, No. 2735). Widely spread on the mainland.

AGONOCHILA FLINDERSI, sp. nov.

Elongate. Prothorax subquadrate (1 × 1.4 mm.); sides lightly sinuate posteriorly; basal angles subrectangular, obtuse at summit. Elytra much wider

than prothorax (3 × 2.3 mm.), resembling those of *A. biguttata*, but a little wider, very finely setulose-punctate. Head, prothorax, tibiae, tarsi, and antennae ferruginous; elytra piceous-brown, a nebulous elongate spot on disc of each elytron between anterior and second setiferous puncture of third interstice. Length, 5.5, breadth, 2.3.

Hab.—Flinders Is. (Simson, No. 3491). Two specimens.

Allied to *A. biguttata* Chaud., but differing by head and prothorax reddish; prothorax wider, anterior marginal seta further from apex, basal angles more decidedly marked; elytra proportionately wider, discal spots less clearly defined, the apical, light-coloured spot is wanting, but this often occurs in *A. biguttata*.

Genus DIABATICUS.

DIABATICUS AUSTRALIS Erichson.

Hab.—Launceston, St. Marys, Flinders Is. (Simson, No. 2609).

Genus MICROLESTES ?.

Table of Tasmanian Species.

Elytra piceous, shoulders and usually an apical spot testaceous	*humeralis* Macl.
Upper surface black, elytra shining	*yarrae* Blackb.

MICROLESTES (?) HUMERALIS Macleay.

Hab.—Hobart (Lea).

MICROLESTES (?) YARRAE Blackburn.

Hab.—New Norfolk (Lea).

Genus ANOMOTARUS.

ANOMOTARUS AENEUS Macleay.

Hab.—Brighton, East Tamar (Simson, No. 2968).

Tribe **Pentagonicini**.

Neck condyliform; eyes of ordinary size	PENTAGONICA.
Neck wide; eyes unusually large and prominent	SCOPODES.

Genus SCOPODES.

Table of Tasmanian species.

1 (10) Prothorax with two marginal setae on each side.

2 (3) Prothorax with posterior marginal seta at posterior angles, these not dentiform. Length, 6.5 mm. .. .. *tasmanicus* Bates

3 (2) Prothorax with posterior marginal seta on an ante-basal, triangular, dentiform prominence.

4 (9) Head with frontal declivity depressed, strongly shagreened; clypeus strongly shagreened, not divided from front by a deep transverse impression.

5 (6) Black (including legs and upper side of basal joint of antennae). Length, 5 mm. .. .. *boops* Erichs.

6 (5) Rather metallic, legs lurid or flavous.

7 (8) Legs lurid; antennae infuscate after third joint. Length, 4—4.5 mm. *sigillatus* Germ.

8 (7) Legs and antennae testaceous; (tarsi and sometimes antennae towards apex rather infuscate). Length, 5—5.5 mm. *flavipes* Black.

9 (4) Head with frontal declivity convex, not shagreened; clypeus with basal part raised into a convex transverse ridge, divided from front by a deep transverse impression. (Black, each elytron deeply 3-foveate.) Length, 3.6—5.5 mm. .. .. *aterrimus* Chaud.

10 (1) Prothorax strongly angustate to base without ante-basal prominence or posterior marginal seta. Length, 6 mm. .. .. *griffithi* Sl.

Scopodes tasmanicus Bates.

Hab.—Launceston, Denison Gorge, George's Bay, Deloraine, Strahan (Simson, No. 3116); Wilmot (Carter and Lea). Also found in Gippsland.

Scopodes boops Erichson.

Hab.—Launceston, West Tamar, Ben Lomond (5000 feet), Strahan (Simson, Nos. 3117, 3691); Cradle Mountain (Carter and Lea). Widely spread in Australia.

Scopodes sigillatus Germar.

(= *S. intermedius* Blackburn.)

Hab.—Evandale, Epping, Flinders Is. (Simson, No. 2971). Widely spread in Australia.

I think there is no doubt but that No. 2971 of the Simson Coll. is *S. intermedius* Blackb., but I cannot differentiate it from *S. sigillatus* Germ.

Scopodes flavipes Blackburn.

(= *S. lineatus* Lea.)

Hab.—Launceston, Golconda (Simson, No. 3507); Waratah (Carter and Lea); King Is. (Lea).

I have in my collection a specimen of *S. flavipes* Blackb., sent to me under that name by Mr. Blackburn, and a cotype of *S. lineatus* Lea, received from Mr. Lea, also several specimens from near Melbourne. With these materials before me I cannot differentiate *S. flavipes* and *S. lineatus*, therefore have felt compelled to unite them.

Scopodes aterrimus Chaudoir.

(= *S. sydneyensis* Sloane.)

Specimens which I obtained at Albany are the same as my *S. sydneyensis;* other specimens which I took in South-western Australia are the form with the head more rugulose, which I considered *S. aterrimus* in 1903; one of these specimens measures 5.5 mm. in length. With the data now available I consider one name sufficient for the species.

Hab.—Great Lake (No. I 1940, South Australian Museum); Launceston (Littler).

Scopodes griffithi Sloane.

Hab.—Mount Wellington (Lea and Griffith).

Tribe **Pseudomorphini.**

Antennae short .. .. Adelotopus.
Antennae long, slender .. .. Silphomorpha

Genus Adelotopus.

Table of Tasmanian species.

1 (4) Prosternum not carinate.
2 (3) Prothorax with anterior angles prominent, triangular; upper surface impunctate. Elytra without post-basal pores. Length 7.5—8.5 mm. .. .. *haemorrhoidalis* Erichs.
3 (2) Prothorax with anterior angles not prominent, widely obtuse; upper surface minutely punctate. Elytra with two post-basal pores near scutellum. Length, 5.5—6.5 mm. .. .. .. *scolytides* Newm.
4 (1) Prosternum carinate. Length, 5.6 mm. (After Blackburn.) *tasmani* Blackb.

ADELOTOPUS HAEMORRHOIDALIS Erichson.

(= *A. inquinatus* Newman.)

Hab.—Kelso (Simson, No. 2611). Widely spread in Australia.

ADELOTOPUS SCOLYTIDES Newman.

What I consider the typical form has the elytra with a very narrow reddish apical edge (Strahan, Zeehan, Simson); other specimens are coloured like *A. haemorrhoidalis* Erichs. [Brighton (Simson); Parattah, Hobart (Lea).] Also found on the mainland.

Genus SILPHOMORPHA.

Tasmanian species.

Black, prothorax and elytra with a narrow reddish margin. Length, 8—9 mm. *decipiens* Westw.

Black. Length, 12—15 mm. ..... *tasmanica* Cast.

Only *S. decipiens* Westw., was in the Simson Coll., numbered 2812, but without exact locality. *S. dubia* Cast., is conspecific with *S. tasmanica*, as I have ascertained from named specimens in the Howitt Coll. *S. decipiens* and *S. tasmanica* have a wide range on the mainland.

APPENDIX.

List of species now attributed to Tasmania, but of which I have not seen specimens from that island, or which have not been dealt with in this paper.

Species marked with an asterisk are only known to me by description.

Species marked with a note of interrogation are those which I believe to be doubtfully Tasmanian, and which might be deleted from the list of Tasmanian species till they are definitely reported from there.

?*Clivina lepida* Putz.
**Carenum politulum* Westw.
**Promecoderus modestus* Cast.
**P. subdepressus* Guer.
Diaphoromerus amaroides Cast.
?*D. australasiae* Dej.
?*Thenarotes discoidalis* Blackb.
**Harpalus vestigialis* Erichs.
**Bembidium hobarti* Blackb.
**Dyscolus* (?) *australis* Erichs.
**Dyscolus* (?) *dilatatus* Erichs.
**Idacarabus flavipes* Lea.
I. troglodytes Lea.
?*Simodontus elongatus* Chaud.
?*Simodontus orthomoides* Chaud.
**Loxandrus gagatinus* Cast.
?*Leptopodus subgagatinus* Cast.
**Homothes rotundatus* Blackb.
**Lacordairei anchomenoides* Cast.
**L. erichsoni* Cast.
**Dierochile punctipennis* Cast.
**Xanthophaea angustula* Chaud.
**Trigonothops lineata* Dej
T. longiplaga Chaud.
**Diabaticus pauper* Blackb.
Cymindis illawarrae Macl.
Pentagonica vittipennis Chaud.
**Adelotopus tasmani* Blackb.

Three other species recorded from King Island by Mr. Lea are not dealt with in this paper, viz., *Amblytelus brevis* Blackb., *Chlaenius australis* Dej., and *Trigonothops vittipennis* Sl.